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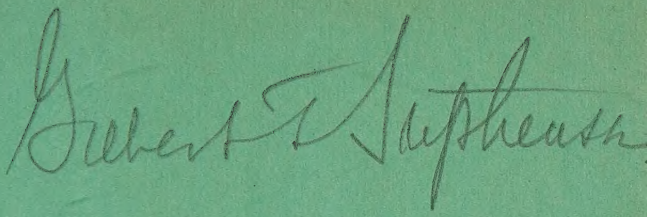

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Modern Business

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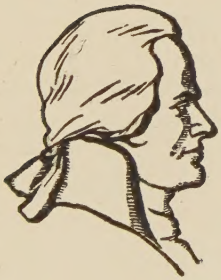

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FINANCIAL AND BUSINESS STATEMENTS

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MODERN BUSINESS

VOLUME 22

DR. NORMAN A. WIGGINS

ALEXANDER HAMILTON INSTITUTE

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PREFACE

Twenty-five years ago it was not so important as at present for the average executive to be familiar with accounting terminology, or to know how to read a financial statement.

Such terms as capital and revenue expenditures, contingency reserves, qualified certification, and the like did not mean much to him. The growth of modern business has changed all this. The executive of today is expected to have a broader knowledge of business than his predecessor of twenty-five years ago.

To help the executive to read a financial or business statement intelligently; to help him get a clearer insight into business statistics; to help him to understand how to interpret professional reports, is the mission of this book.

The author has avoided, as much as possible, the use of highly technical terms. He has attempted to interpret the contents of financial and business statements rather than to deal with the construction of such statements, as that feature is fully covered in the volume on "Accounting Practice and Auditing."

Where the subject matter treated is of a controversial nature the author has endeavored to give the "pros" and "cons," always leaving to the reader the freedom of choice. In some cases the reader will find

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that one phase of such subject matter is treated in this volume while the other phase may be treated in another volume. Thus the question as to whether interest on capital is a proper charge to cost of production is treated in the affirmative in "Cost Finding," while the negative side is treated in this volume.

As the corporate form of management, tho not universal, is far ahead of partnerships and individual proprietorships in popularity, financial budgets are becoming an important feature of modern business. For that matter, even in the case of sole proprietorships it is preferable to have the fiscal financial plans fully developed and properly arranged in budget form than to grope in darkness. So far as the author knows, this is the first attempt to put before American readers information on the preparation of private financial budgets. To help the reader contrast the private business budget with municipal budgets, the writer has added information on the latter.

The author takes this opportunity of thanking Mr. J. T. Madden, C.P.A., (N. Y.), Professor of Accounting at New York University, Dr. R. P. Falkner, and Mr. F. C. Russell, of the Alexander Hamilton Institute, for their valuable aid in the preparation of this volume.

LEO GREENDLINGER.

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FINANCIAL AND BUSINESS STATEMENTS

CHAPTER I

IMPORTANCE OF CLASSIFIED INFORMATION

1. *Present need for classified information.*—Probably at no previous period in our economic history has it been so important to the business man as it now is to have all kinds of information about his business available to him in classified form. With the growth of modern business, with specialization and standardization of factory and office routine, it has become increasingly important that executives and their immediate subordinates should have the right kind of statistical information about the activities of a business.

The old practice of closing the books once a year in order to determine whether a profit had been made or a loss sustained is becoming obsolete. The business man of today wants *daily* information. He wants, also, that information in comparative form so he can tell how it compares with that of a month ago, or a year ago. To compete successfully with other business men he must know the causes that have con-

tributed to the success of the year's sales, as well as the factors that have caused any loss during the year.

2. *Classified information measures efficiency.*—Properly classified records act as a measure of efficiency. Factory superintendents and other department heads may endeavor to explain the reasons for the condition of business as disclosed by the records. The indisputable fact, however, remains that the records will point definitely to either a profit or a loss.

With proper records before him the executive is enabled to determine where the responsibility for the condition of his plant or any department of it rests. He is then in a position to strengthen the weak points of his department heads and to help them develop their strong features.

3. *Business policies.*—From an analytical study of the classified information the managerial body of a business enterprise is able to determine the future course of action. If, for example, the results show that a previous advertising campaign increased the volume of business, it is quite likely that a more extensive advertising policy will follow. Similarly, if the records show that while the volume of business has increased, the cash receipts have not kept a proportionate pace, assuming that the terms of sale are the same, it is evident that there is a weakness in the credit department or in the credit policies. This result, if not offset by other factors, may call for a restricted policy in the expansion of credits.

At this time more than at any other it is obvious

that the business man must base his action regarding his future business policies upon the experience of past performances as shown by properly classified records. He must not rely on memory.

4. *How outside factors affect a business organization.*—In interpreting a set of financial statements one has necessarily to put together many related but apparently separate facts into a general picture which will portray in compact form the condition of the organization. One must, therefore, not only read into the statements facts taken from a set of books, but he must also consider unrecorded facts as well. This point will be discussed in greater detail later, but it is mentioned here to bring home the effect of unrecorded factors on future conditions. Such things as changes in selling plans, increased cost of labor, increased freight rates, etc., all will have a direct effect on the business. Any one who analyzes financial or business statements must estimate the probable future conditions in the light of these outside factors. Moreover, certain adverse results, as indicated by the financial statements, may be entirely explained and accounted for by some condition which is only temporary.

Thus, for instance, a severe flood in a western city might have caused a decrease in the sales of a business whose greatest volume was disposed of in that territory. Inasmuch as the condition was only temporary in its effect, one would not be justified in basing upon the net results shown for that year an opinion concerning the usual volume of business done.

5. *Financial statements classified.*—As already mentioned in the other volumes on accounting, the principal financial statement is the balance sheet. This statement discloses the financial condition of a business at a particular time. It is well for the reader to bear in mind at this point that a balance sheet is only an expression of opinion regarding the financial condition of a business at a given time. The importance of this statement will be made evident later on.

The next statement in importance is the profit and loss, or income statement, sometimes called the profit and loss, or income account. This statement presents a history of what has occurred since the date of the last balance sheet.

Each of these statements may have supporting schedules showing in greater detail information concerning some factor or factors of the business. In a large undertaking, both the balance sheet and the profit and loss statement will usually be prepared in detail as well as in condensed form.

The condensed income statement usually reveals only the general tendencies of the business. One has therefore to refer to supplementary or explanatory statements that, as a rule, accompany the main statements, for the details of the various transactions.

6. *Statistical information.*—To supplement the balance sheet and income statements many forms of statistical statements are often prepared. These statements serve the purpose of explaining many of

the items that appear in the main statements. It is self-evident that too much detail cannot be conveniently presented in a single statement, if it is to be of any value. It is a well-known fact that both the eyes and the mind of a person reading a statement can grasp only a limited amount of material at any one time. It stands to reason, accordingly, that if one is confronted with many columns of figures, even the main essentials of the business may escape his attention. It is therefore important to prepare special schedules and statistical statements apart from the main statements.

As a rule, statistical statements proper take up what might be called the non-financial side of the business. Thus, for instance, plant statements are often prepared to cover the unit production, or possibly the unit cost. To be more concrete, a telephone company, for example, will prepare a plant statement showing the amount and cost of all new construction work carried out. Such a statement would show in terms of miles the amount of wire put up, distinguishing copper, iron, and steel wire. It will show also the number of exchanges, or private telephones installed, and other items of similar nature.

Statements of this kind are often made because they are used as a means of throwing additional light on the condition of the business, showing its progression or retrogression in what might be called the physical aspect of the business.

7. *Departmental statements.*—Just as it is impor-

tant to obtain classified business information on the condition of a business as a whole, it is equally important to follow out the results of different departments or of individual functions. It is thus advisable to prepare special profit and loss statements from each department of a business. It is equally desirable to prepare departmental statistics.

In order to manage his department right, the head should have before him regularly prepared statements that will keep him in close touch with the detail and routine of his department. A monthly condensed statement, supported perhaps by weekly summaries and daily reports, giving full details of the revenue and expenses of his department, reveals to him in chronological order, the facts of all the routine and constructive end of his department.

8. *Purpose of financial statements.*—The main purpose of a financial statement is to show the condition of a business in a more condensed form than is available from an examination of all the facts shown in the records. This information, if arranged in an intelligible and readable form, will be used by the management and persons outside of the management, such as stockholders, bankers and investors. These statements will be examined to check up the efficiency in operation and in management. They will also be used to determine the value of the assets, the present financial condition, and the probable future earnings.

9. *Prerequisites of the executive.*—An executive who is to make the most of various statements which

are brought to his attention not only must possess a broad knowledge but also must be able to draw upon many sources of information. He must understand the basis upon which assets are valued, and be competent to pass upon the relative values of various accounts or groups of accounts as compared with other and different groups. Moreover, he must have a knowledge of accounting terms and their true meaning, and a knowledge of the principles underlying the construction of financial statements. Finally, he must be able to pick out the false from the true and to know what is omitted from a statement as well as what has been furnished. It will be readily seen, therefore, that sometimes it is vastly more important to deduce the information which the accounts fail to disclose than to understand that which they reflect.

10. *Requisites of proper financial statements.*— The variety in the kinds of business and the different physical or artificial conditions accompanying them makes impracticable a single type of accounting system. The form of financial statement which will best serve the individual purposes of any concern must be particularly adapted to that undertaking. No one form of statement will be equally serviceable in different organizations.

11. *Financial statements should be comparative.*— While it is clear that much information can be obtained from a single balance sheet, and from a profit and loss, or income statement of one period, it is

equally obvious that changes in conditions made during a given period can be regarded as satisfactory only when they represent an improvement over a previous period. The effect of new policies, changes in management, and the like, cannot be fully measured unless the results, as shown in statements, are given in comparative form. This holds true not only with regard to main income statements and balance sheets, but also as regards sub-schedules and departmental statements. By observing the effect of a particular policy for several years the management is in a far better position to estimate the value and the effect of it.

12. *Importance of the personal element.*—Mention has been made of the importance of outside factors in connection with the interpretation of financial statements. The personal element is perhaps the most varying as well as the most important factor. Mistakes in management often offset all of the favorable characteristics which a business may possess. It is therefore important to give proper consideration to the individual efficiency of every man in an administrative position.

Harmony and cooperation of effort is a salient feature of the human element question. Individual stars will not bring success to a business unless they are willing to cooperate with the heads of allied departments.

Expansion in one department at the expense of another or in undue proportion as compared with

others will frequently result in internal strife or financial loss.

To obtain a clear idea of the possibilities and opportunities of a business, one must be able to appreciate not only its present condition but also the advantages and opportunities, if any, that will accrue to it in the future.

13. *Consideration of outside factors.*—Many outside factors, as already stated, will affect costs and sales, but they cannot be discovered from the recorded data. The demand for most products is frequently an uncertain item. One must therefore ascertain what probable future demand will be made. The demand for specialties and commodities that are on the border line of staples will naturally be subject to great fluctuations.

In connection with costs, the probable supply of raw materials is an important consideration. Assuming that there is a steady demand for the product, we must be sure that the cost of the raw materials will not rise and that supplies will not be entirely cut off.

Labor problems are frequently the rock on which the success of a business is wrecked. Sources of labor, the probability of strikes, and the development of unions are important outside factors affecting costs and sales. Transportation facilities and transportation costs are likewise important in this respect. They must all be ascertained and considered if the financial results of a business are to be properly interpreted.

14. *Executive's reasons for a study of financial statements.*—Three considerations should lead the executive to study financial statements.

First, he must be able to get all possible data on the condition of his own business. That can be obtained only from reports prepared in proper form.

Secondly, he is interested in furnishing to others honest and exact statements of the condition of his business.

Thirdly, he should be able to read the financial statements of others so as to get a true picture in his own mind of the business conditions of those with whom he deals.

15. *Stockholders' reasons for a study of financial statements.*—Inasmuch as the stockholder has not the first-hand information regarding the inside factors which the managing officials have, he must necessarily read "between the lines." His chief use of the financial statements will be to employ them in deciding upon the value of the services rendered by his board of directors. He will use the statements also to guide him in his control over his representatives in the management of the company.

The particular interest of the stockholder is in the payment of dividends or the return on invested capital. He is also interested in knowing that such payments are made from revenues earned and realized. He is therefore concerned to know whether the property has been fully maintained and whether all income has been honestly and faithfully recorded.

16. *Information as a guide to legislation.*—The importance of classified information upon legislation is very seldom realized. In the recent agitation of railway employes for increased wages, the figures of cost varied from twenty million dollars, the estimate of railway employes, to one hundred million dollars, the estimate of the managers. There should not be such a wide margin between the estimates.

We have been told that child labor was necessary for the existence of the cotton industry of the South. Reliable facts in support of this assertion have not been forthcoming.

When the agitation of a ten-hour working day was at its height, manufacturers asserted that industry would be bankrupt. The outcome happily was not what the pessimistic manufacturers declared it would be.

Do we know the industrial cost of a universal eight-hour working day? Classified information, properly interpreted and analyzed, will furnish an answer to that question. Have we not rather been content in many cases with the gathering of statistics and the tabulation of results, rather than attempting to analyze and properly interpret the information which we already have? In fact, the lack of public faith in the statistics which are offered in the discussion of the great social and economic problems of the present day, arises in part from the erroneous interpretation and unscientific analysis, or the lack of proper interpretation and analysis, of the mass of tabulation and statistics which we now possess.

REVIEW

What business purposes does classified information serve?

What are the sources of the information which is useful in judging the condition of a business?

How do comparative figures add to the significance of any financial statement? Name some of the outside factors which affect the interpretation of the financial statement.

What reasons for desiring classified business information has the executive? The stockholder?

How might facts, properly ascertained and correctly interpreted, guide legislation and public administration?

CHAPTER II

STATISTICAL AND GRAPHICAL STATEMENTS

1. *Purpose and scope of business statistics.*—The reader has already been familiarized with the value of statistical statements as supplements to financial statements. By business statistics we mean the records that grow up out of the operations of industrial and mercantile establishments. As a rule, these statistics are as varied in their contents as the different lines of business from which they are taken. Thus, the records of public service corporations will differ widely from those of manufacturing or mercantile establishments.

When the prevailing type of business was the general country store, statistical records of operations were impracticable. As business became more and more specialized, accurate cost and sales records became possible. As industry became concentrated in its ownership, comparisons of the operations of different plants under the same control was an inevitable consequence. Thus was formed a body of records sufficiently extensive to merit the name of business statistics.

The demand of the business man for information concerning every detail of his business has resulted in

the invention of a large number of mechanical devices that permit the gathering of an increasing amount of statistical information. A large part of this material is furnished by modern accounting methods. The old-fashioned bookkeeping was confined in a large measure to recording receipts and disbursements. Modern accounting analyzes the transactions which give rise to these effects. It groups them in classes; it measures service as well as financial results and brings the two into proper relations, one with the other.

2. *Official and business statistics.*—Business statistics, as distinguished from government statistics, are the practical result of the tendencies in modern business toward specialization and toward an increased size in individual enterprises. Some modern business concerns have become so extensive that their administration, as pointed out in the Texts on factory and office management, is in many respects comparable to that of cities and states, and branches of national governments. Indeed, it would seem that at times the problems of business concerns are infinitely more complex and difficult than those of government.

As business approaches in its administrative problems more and more closely the operations of public authorities, it is not surprising that it should avail itself to a greater extent of methods which have long been established in government practice. From this adoption of government methods comes a growing use of statistical statements in business management, and

the increasing frequency of definitely organized statistical departments in business concerns.

People sometimes think of government statistics as being gathered to meet some fancied need or to satisfy an idle curiosity. It must not be overlooked that these statistics have their root in some real need of government, or the necessary basis for transacting its business.

In other words, it is not mere habit or routine which leads the governments of the world to publish each year a vast quantity of books crammed with official statistics. On the contrary, it is done for definite, practical purposes. The larger part of these statistics is designed as a basis for action.

Thus the census of the United States Government, which involves the employment of many thousands of persons and the expenditure of many millions of dollars, had its origin in the necessity of determining the basis of representation in Congress.

Similar illustrations are found in the statistical records pertaining to revenues, expenditures and public debt.

3. *The contents of business statistics.*—As each line of business has its own peculiar operations to record, it would be ridiculous to attempt, in this growing field, to classify the various kinds of statistics which might arise. What is needed in any particular business can best be judged by those who are engaged in it. Experience shows that when thought is given to this matter the volume of records often becomes very consid-

erable. It is quite as possible to overdo the gathering of such records as to neglect them. The information which can be presented in statistical form, should first be carefully weighed, and its value estimated before elaborate preparations for securing such data are provided.

4. *Uses of business statistics.*—It would be equally futile to seek to classify the various uses to which statistics may be put in the conduct of a business. At best, a general treatment of the subject can give only some suggestions of this nature. This can best be done by a rather full treatment of their use in some definite phase of business administration. Because of their importance in the general scheme of business organization, departmental reports have been chosen as the subject of this special study.

5. *How much information should department heads be given?*—Some managers believe that the head of a branch should not be informed as to the amount of profits made by his branch. They feel that the manager might use the information as a lever for securing an increase in salary. If it is desired to reduce the apparent profits of the branch and at the same time allow the manager to have the results in dollars and cents, this can be accomplished thru the medium of an arbitrary overhead charge. When the statement of financial results is given to the branch manager, the gross profits will be shown. From the gross profit will be deducted the amount of the arbitrary charge for overhead, which will, of course, reduce the net

profit. In this way, the real profitableness of the branch may be concealed from the branch manager, who will not know the details of the overhead charge.

There is no real reason why department heads should be kept in the dark as to the progress which is made by their departments. Of course, a department head need not be informed as to what is going on in another department, nor should he be entitled to information as to the condition of the business as a whole. But, the department manager will not have that personal interest in initiating new policies or putting new projects into operation unless he can learn the financial results of these undertakings. The department heads will be able to guide themselves in new projects by having at hand records of the results obtained by previous undertakings of a similar nature.

6. *Record of orders and sales.*—The manager should receive a statement of the total orders each month, or if the department is a large one and is doing a large volume of business, these reports may be made up daily. The report should show the orders received up to the beginning of the present month, the orders of the present month, and the orders received during the preceding month. This information will be accumulated from day to day or month to month. From this amount should be deducted the amount of orders delivered and the amount of cancelations, leaving as the balance the amount of unfilled orders on hand at the present time. This information should be

shown in comparative form, giving the results of one or more preceding years, so that the department manager can endeavor to increase his sales, speed up deliveries or, if orders fall off, to determine the causes thereof.

A similar comparative record of the sales should be furnished him. The sales for the current fiscal period up to the first of the month, the sales of the month, and the sales for the preceding month should be set forth; the record of sales should show also the amount of the returns and allowances to date. In addition, the sales records of the individual salesmen and saleswomen in the departments should be furnished.

7. *Inventory and purchase records should be available.*—Inventory and purchase records should be furnished at periodic intervals. There is always great danger of a department manager's overbuying, or allowing stock to accumulate, thus tying up an unnecessary amount of capital in inventories. The information furnished to the department managers should give the inventory on hand at the last report date, the purchases during the interval, and from the aggregate of these two amounts, the cost of the sales should be deducted. The last amount may be conveniently found, either by reducing the sales by the amount of the departmental mark-up, or by reducing the sales by the amount of average gross profits realized by the department in preceding periods.

There should also be furnished to the department head, if he is allowed to purchase his own material or

merchandise, a record of the amount of merchandise purchase orders as yet unfilled. If some of the purchase orders apply to the current season and some to a later season, this information should be clearly set forth. With the information as to his present stock, and the amount of undelivered purchase orders, the department head is enabled to guide himself in meeting the requirements for stock.

8. *Analytical expense statements.*—The department manager should also be furnished with a departmental analytical statement of expenses incurred or charged to his department during the period. As already mentioned if the executives do not wish the manager to know the actual net profits of the department, they may, of course, load this expense statement with an arbitrary and fixed amount of overhead.

9. *Departmental profit and loss statements.*—The information with reference to sales, purchases and expenses should then be gathered together into a departmental profit and loss account or statement, arranged in comparative form, covering similar prior periods, so that the department manager may be able to know how his department has progressed or fallen behind. These statements will also prove of advantage to the department head if he is called upon subsequently to furnish the executives with a budget estimate, or the probable income and expense of his department for an ensuing period.

10. *Results expressed in percentages.*—Percentage statements indicate the trend of business more clearly

than statements worked up in dollars and cents. Thus, for example, the department manager should be given the ratio of gross profits to sales; the ratio of net profits to sales; the ratio of salary to sales; and the ratio of advertising, interest and total expense to sales. These expense statements, as indicated above, should be furnished in comparative form. The fluctuations in percentages constitute an accurate gauge of departmental or company operation, undisturbed by increases or decreases in the amount of business done. In addition to these statements, the department manager should be furnished with the turnover of his department for the period.

Some executives object to the expense entailed and time consumed in preparing these reports. The time consumed may be materially reduced by the introduction of printed forms, and the calculations may be shortened materially thru the use of calculating devices. Others say that the information would not be used by the department heads. Often this latter statement is true, because the department heads are not competent to analyze many of the reports that would be presented to them. We occasionally find a good merchandise man who will succeed in making money for his department without the aid of comparative reports of progress. This type of man, however, is rather unusual, and it may not be wide of the mark to say that even a good merchandise man can profit by a study of results presented to him in proper form.

In some organizations it is customary to keep a perpetual inventory and stock record by sizes and qualities, and it is advantageous to furnish the head of a department, from time to time, with stock sheets showing the condition of the stock. He will then be enabled to determine the lines or sizes or qualities, which are selling, and those which are moving slowly, and concentrate his attention on the problem of getting rid of the stock that is accumulating, or for which, perhaps, the proper demand has not been created.

11. *Form of statistical statements.*—The statistical statement is characterized by two things: first, that it is expressed in figures, and second, that it relates to a number of things of which it is a condensed summary. The fact that a given make of automobile is sold for $3,000 is not statistical, but if the statement is that automobiles range in price from $500 to $5,000 it has the marks of a statistical statement. It is a fact expressed in figures relating to automobiles in general.

All statistical statements express or imply a comparison. It is of the utmost importance that this comparison be correctly stated and that the consequences which are derived from it be rightly estimated.

The reader will recall what was stated regarding fallacious statistics, at the close of the first chapter. Statistical errors and statistical fallacies are for the most part not mistakes of figures, but wrong thinking about figures. It is evident that no rules can be devised to save people from illogical thought; the most

that can be done, in a negative way, is to avoid inviting incorrect conclusions by the manner of stating the problem, and, in a positive way, to call attention to the need of careful analysis.

12. *Statistical comparisons.*—The principal comparisons with which statistics deal, concern (1) the same things at different times, (2) a thing in relation to some larger thing of which it may be a part, and (3) one thing in its relation to something else which is supposed to influence it. Some of the chief characteristics of these principal types of comparison deserve brief consideration in connection with the uses of statistics in business.

13. *Past and present performances.*—One of the most usual of statements which are met in business life, is the comparison of current results with past achievements, the sales of this year, month or week with those of last year, month or week. In all such comparisons the two elements should have equal weight, tho it is an instinctive tendency of the mind to regard what is more remote as something normal with which to compare what has more recently been accomplished.

14. *Results, year by year.*—Thus men of business will explain why this year's sales exceeded those of last year. It never occurs to them to explain why last year's sales failed to reach the level of this year's, tho in some cases this would be the most reasonable way of stating the case. It may be that this year represents normal conditions, while last year had abnormally small sales.

Because of this tendency to accept the earlier dates as normal, it is well to choose what is instinctively regarded as the basis of the comparison with great care, and to be sure that it actually is of normal character for the purpose in hand. A comparison of the business done in 1915, for example, with that of 1914 would not necessarily be incorrect, but might easily lead to false impressions. Figures for the year 1913, representing less disturbed business conditions, should be added to make the full meaning of the 1915 figures apparent.

15. *Results, month by month.*—What is emphasized regarding yearly results applies with equal force to monthly results. We must assure ourselves in comparing results, month by month, that there is no seasonal variation which would affect them. Proper comparisons are possible only when the corresponding month of a previous normal year is considered.

A point that often escapes attention is, that when any given facts occur with a very even distribution thruout the year, the difference between one month and another will be very slight. Oftentimes the difference is fully accounted for by the fact that the months are not of equal length. It is therefore a good rule, when the difference is slight, to reduce the figures to daily averages and make comparisons on this basis.

16. *Results, week by week.*—The longer the period of time to which the figures relate, the more likely is the effect of accidental variations to be diminished.

It is never wholly eliminated. Conversely, the smaller the period of time, the greater the caution which must be used. Comparisons of one week with another, whether the previous week or the corresponding week of last year, which ignore special holidays, weather conditions and the like, prompt to wrong conclusions. To illustrate, a shoe dealer would not be likely to compare sales of rubbers in the first week of November in one year with the same week in another without first asking himself how the weather at the two periods compared. The use of the obvious illustration is intended merely to call attention to the fact that similar conditions may in less degree bring similar effects, and that these are not negligible quantities. It is therefore advisable, when conclusions are drawn from statistics, to qualify the comparison by the addition of the phrase "all other things being equal."

17. *Results, day by day.*—Daily comparisons must be handled with the utmost care. That is obvious, because it is so easy for some purely accidental circumstances to throw these comparisons out of gear.

In the summer of 1916, when the public was watching day by day the figures of American exports the New York *Journal of Commerce* called attention to the fact that altho Saturday was a favorite sailing day for ocean steamers, the reported exports for Saturday were invariably less than for other days of the week. Investigation showed that the daily returns reported to the press were not those that were *made*

each day, but those *tabulated* each day. As Saturday was a short working day in the government offices, fewer figures were prepared on that day and hence the falling off in exports reported.

18. *Establishing standards of comparison.*—The obvious remedy for some of the difficulties noted in the preceding sections is to establish proper bases for comparison. These usually take the form of a fair average of past conditions, but under certain circumstances it is possible to establish a normal result and observe the variation of actual figures from it. To secure a proper basis for comparisons it may be necessary to take averages covering a long period of years. Suppose the question to concern sales of September, 1916. It may be necessary, in order to obtain the necessary basis for a judgment, to make calculations as complicated as those which follow:

SALES

Year	*Year ending Sept. 30*		*September*		
	Amount	*Per cent of 1901–1910*	*Amount*	*Per cent of 1901–1910*	*Per cent of year's sales*
1901–1910 (average)	$522,000		$45,000		8.6
1911	530,000	101.5	45,800	101.8	8.6
1912	546,000	104.6	47,800	106.2	8.8
1913	550,000	105.4	48,000	106.7	8.7
1914	480,000	92.0	32,000	71.1	6.7
1915	560,000	107.3	57,000	126.7	10.2
1916	640,000	122.6	54,500	121.1	8.5

If in this case we had before us only the results for September, 1915 and 1916, the only thing we could see would be a falling off in the latter year. What that meant we should not be able to appreciate. If

we added merely the figures for 1914, we might be still more confused. But with all the figures above given before us we can know the situation thoroly. The general volume of business has been subject to fluctuation. In the main it increases, but in 1914 adverse business conditions brought about a decrease. September sales until 1913 moved along at about the same rate as the business in general. In 1914 they were smaller compared with 1901–1910 than were the sales of the year. This was, it will be remembered, about the lowest point in business activity of that year. In 1915 they increased more than the general volume of sales; the recovery in other words gained impetus toward the end of the year ending September 30. But apparently the growth did not continue thru the next year at the same rate.

19. *The percentage.*—One of the most frequent devices for making figures comparable is the reduction to percentages. This is essential when the units compared are of different sizes. That one concern has an advertising expense of $50,000, and another one of $120,000 per year, tells us nothing unless we know the volume of sales to which these figures relate. Even then we must reduce them to a common unit.

In the illustration given in the preceding section, the percentage of the September sales in relation to the total sales tells the same story as the other figures but in a different way.

In discussing a series of percentages care should be taken not to express the difference between the num-

bers of the series as so much per cent unless this is strictly what is meant. If the series of percentages compared is A, 78; B, 82; and C, 96; we not infrequently hear it stated that B is 4 per cent higher than A, while C is 18 per cent higher than A. This is not the fact, as these differences are points, not percentages. To express them in percentages A must be taken as the base, and it will be found that B is 5.1 per cent above A, while C is 23.1 per cent above A.

When a percentage has been calculated for the numbers of a series, as the months of a year, or a quarter, and the average percentage for the whole period is then wanted, the mistake is sometimes made of calculating this average from the individual percentages and not from the totals of the original figures. The following supposed case will illustrate.

	Sales	*Selling Expenses*	*Per cent*
January	$ 56,248	$ 6,432	11.4
February	38,962	5,896	15.1
March	74,839	6,824	9.1
1st quarter	$170,049	$19,152	11.3

The percentage given for the quarter is the correct one based upon the division of the total selling expenses by the total sales. Had the percentages for the three months been added and the total divided by three, the result would have been 11.9.

20. *The ratio.*—The ratio between one fact and another is of frequent use in official and business statistics. Instances are shown in the per capita consumption of wheat, liquors and other commodities; in

railway receipts per mile of road, in costs per unit of product and in many others. Here again the caution should be given that such comparisons may tell as much about one factor as another. Comparison of per capita sales of farm implements in Rhode Island and North Dakota for example, would not indicate much about the character of farming in these two regions, but chiefly that one was a farming country and the other was not. Sometimes such ambiguity can be avoided by a better choice of things compared. Consumption of fertilizers for example would be compared more appropriately with the acres of improved land in farms in the different states than with the number of the population.

21. *Graphic statements.*—It is a variation of the usual statistical form of the statement when the facts to be expressed are not given in figures, but are shown in pictorial form, by means of lines, curves, surfaces and other geometric figures. Such graphic methods are coming to play a larger and larger part in the business world. Executives, sales managers, and advertising men are finding a constantly increasing use for such methods of presentation as a means of grasping rapidly the results of business administration which are vital to the work in which they are engaged.

The use of charts and diagrams, or to borrow the term which the scientists have introduced into the language and which is making its appearance in general writings, of "graphs," owes its growing frequency to the apparent ease with which such representation of

facts can be understood. There are many persons to whom series of figures carry no significant message, but who can readily see the proportions of things, their increase and decrease, and the other relations which are expressed by statistics, when they are shown in the form of the diagram or chart. It may well be that this applies to the majority of persons, and that only those trained in the use of figures can grasp their real significance. This, however, is a training which comes with practice, and because of the limitation of the graphic methods, is not to be overlooked.

One of the disadvantages of the otherwise excellent graphic method of presenting facts is, that while the diagrams give to the eye a very definite impression, it is oftentimes difficult to reproduce this impression in language. In other words, diagrams as such cannot be quoted. On the scales in which they are usually presented, exact measurements are impracticable. It follows therefore, that the use of graphics is to emphasize a general impression, and in order that this impression may be as concrete as possible it is a useful rule, too often neglected, that the facts displayed by line or solid should at the same time be given in terms of figures.

22. *The appeal to the eye.*—The purpose of graphical presentations is to make an appeal to the eye, and it follows at once that this appeal must be simple and direct. The diagram should not impose too great a burden on the vision, or too fine a discrimination between the points which are depicted. When the dia-

gram is made by means of lines drawn to a scale, there is oftentimes a temptation to put too much on the diagram, with the result that there are often several interesecting lines. Without the use of color, and this is in most cases not available, it is very difficult to draw, at the best, more than two or three lines which can be clearly distinguished one from another. Hence the best usage in charts of this character calls

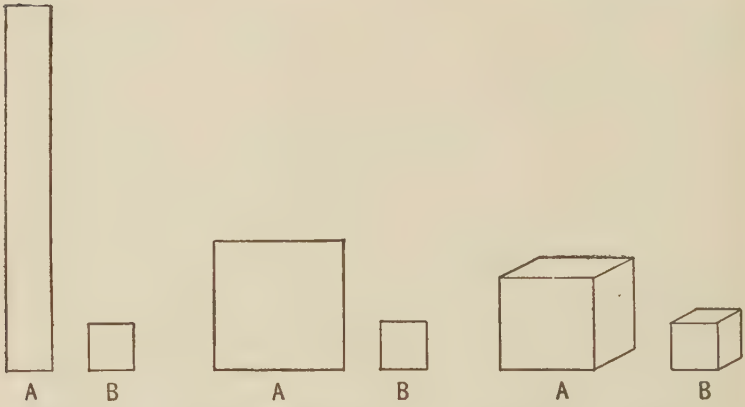


FIGURE 1. IN EACH OF THESE COMPARISONS A IS EIGHT TIMES AS LARGE AS B.

for not more than two or three lines, and this, of course, means a decided limitation upon the amount of material which can be displayed in a given space.

Where the eye is called upon to judge relative size as, for instance, when the exports of different years or the exports of different countries are compared, the most effective presentation is the line diagram. The use of squares, circles or other surfaces, and especially flat representation of solid bodies, is to be avoided.

Perhaps the greatest sinners against this rule of simplicity are those who address themselves to the least intelligent audience, and who in school books and in magazines of popular circulation, represent, for instance, the exports of different countries by pictures of sheep, ingots of gold, bales of cotton or hogsheads of wine, of different sizes. The foregoing illustration will make this point clear, and speaks so plainly for itself that additional comment is not necessary.

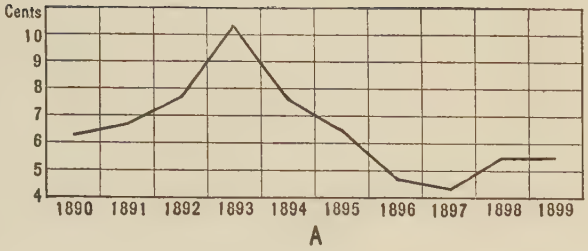
23. *Curves.*—The most frequent way in which graphical statements are made is by the use of the line, or as it is sometimes technically called, "curve," in which the height of the curve from the base measures the magnitude of the phenomenon in question, while the distance from the left-hand side of the page represents the period of time to which the facts relate.

The rule of simplicity makes it advisable that all distances should be measured by the eye from the same base. If we disregard this rule, and try to represent different elements which enter into the problem by superimposing one on the other, with the thought that in this way we obtain an aggregate, the result is disastrous. Only two lines in the entire chart are clear, the first above the base and the line which represents the aggregate. The other lines cannot easily be read by the eye, and if we want to observe their tendency they must be taken out of the chart and redrawn so that for each of them there is a uniform base from which to measure the height. Where the lines are drawn from the same base, it is sometimes expedient

to draw each line in a separate chart on a uniform scale.

The preparation of line charts requires considerable care lest false impressions be given. One of the frequent failings of the charts in common use is that they are incomplete. They give only that part of the chart which contains the line and do not indicate the distance of this line from the base. In the use of such partial charts it is quite possible to give very different impressions as to variations by changing the scale of the chart. This is illustrated in the four charts which follow, representing the same sequence of facts. They refer to the average price per pound of prime contract lard, as reported by the United States Bureau of Labor Statistics from 1890 to 1899. Each of the four lines given represents the same facts. In A and B the difference is in the height assigned to the several prices. In C and D the difference lies in the width assigned to successive years.

It is plain that neither of the charts A and B is absolutely incorrect, but both are incomplete. In the case of chart A, the zero line would be approximately one and a quarter inches below the line indicating 10 cents, while in the case of chart B this distance would be two and a half inches. The consequence of giving only a part of the charts is that in one case the fluctuations appear inconsiderable and in the other very marked. It will be noted that in these charts the same amount of space has been given for each year. It may also be noted that the line becomes more even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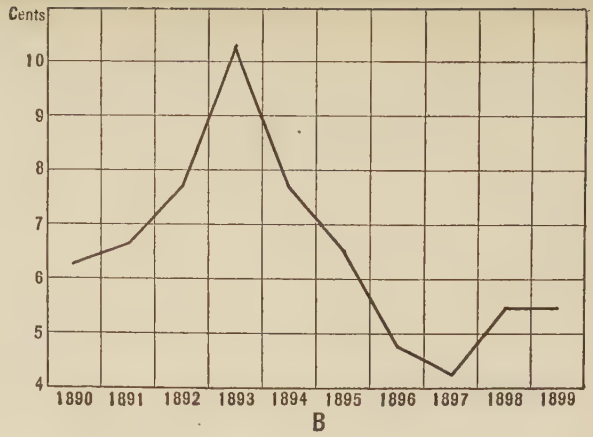
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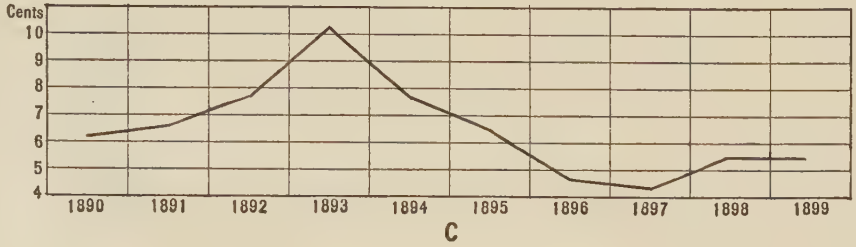
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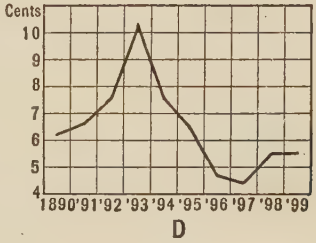
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when a large space is given to each month, and more jagged when the space is reduced (Charts C and D).

Because of these peculiarities of the lines it is well not to place too much reliance upon the comparison which results from placing side by side two charts which are drawn on a different scale. In such cases the conclusion drawn from the comparison might be called correct, but it is advisable also to have the actual figures by which to test the apparent conclusions to be drawn from the graphic statements. If the charts can be reduced to some common measure as, for instance, percentage above or below the average for the period, the comparison becomes much safer.

24. *Need of caution in interpretation.*—Whether the statistical facts be expressed in figures or in charts too much emphasis cannot be placed upon the need of extreme caution in the interpretation of the facts recorded. No golden rules can be devised which will keep a man out of the pitfalls which beset him in this field. But if he brings to the analysis of facts the qualities of caution and the habit of thoro examination of matters from all points of view, he will find that statistics, whether in tabular or graphic form, are a powerful aid in the proper apprehension of business conditions.

REVIEW

Why have we seen in recent years a considerable development of business statistics?

Describe the character of the statistics which would aid a department manager in getting the best results from his work.

Define a statistical statement. What types of comparison does it commonly express or imply?

Name from your own experience instances in which comparisons of one type or another have been used in business.

Describe various forms of graphic presentation of statistical facts, and explain the advantages and disadvantages of the graphic method.

CHAPTER III

AUXILIARY STATEMENTS

1. *Schedule of accounts receivable.*—The reader has already noted that the principal statements which the manager will receive at the end of a stated period —say, a year, will be the balance sheet and the profit and loss, or income statement, covering the business as a whole for a given period. As a rule, these statements will be submitted in comparative form, and they will be supported by schedules that will show the operation of each department.

The manager of a business will quite often require statements that will give information of the business in a form that will enable him to study certain features. This will depend, of course, upon the nature of the particular business. Frequently, the schedule of accounts receivable is prepared to show the amount due from each customer and the time when the amount is due. Often, this schedule is prepared in a form to show the amount of the balances from one to thirty days old, from thirty to sixty days old, and over sixty days old.

When the number of accounts receivable is large and the amounts involved are comparatively small, it

is not advisable to have a detailed schedule. In such cases it is better for the manager to provide an automatic separation of the delinquent accounts from the accounts that are in good standing, and to provide for a proper system of control, both for the delinquent ledger and for the ledger containing the accounts in good standing. By analyzing the delinquent accounts and referring to the amount of each, as compared with preceding periods, the manager will be able to check up the efficiency of the collection department.

2. *Statements of new customers.*—A manager may often find it advisable to require reports on the number of new accounts opened during the business period and the amount of sales to the new customers. He should, at the same time, have reported to him the names of old customers who have not purchased during the period, or whose purchases have fallen below those of previous periods. A sufficient amount of attention is usually given to this particular feature of a business. Investigation, however, may disclose unsatisfactory conditions that would otherwise not be brought to the attention of the management. The preparation of such a list will act as a sort of internal check on conditions that may inadvertently have escaped the eye of the management.

Complaints from customers, in some cases, are not brought to the attention of the manager. A customer of a house feels disgruntled at the treatment he has received; he may not make any complaint, but will

place his future orders with other concerns. If the manager has before him the information mentioned above, namely, new accounts opened and old accounts from which no business has been received during the present period, it must prove invaluable to him.

3. *Importance from management standpoint of notes taken from customers.*—When it is the custom to take notes from customers in settlement of their accounts, it is advisable that the amount of notes received from each customer be reported at regular intervals. It is also advisable to have reported at the same time the amount which such customers owe on open accounts. In addition, if any of the customers' notes have been discounted and have not as yet matured, the information on them should also be included. It will be readily seen that a report of this character will, at all times, disclose to the manager the condition of a customer's account. This is especially true if the account is one which is being "nursed" by the management.

4. *Schedule of inventory.*—It is advisable that the management pay considerable attention to the inventory schedules that are prepared. It very often happens that department managers allow dead stock to accumulate—a condition which would have been disclosed had the management properly examined the detailed inventory. The author recommends that a schedule be prepared showing the amount of the inventory located in different departments or different

warehouses, the amount of insurance carried on each warehouse, and so on.

If a perpetual inventory system is maintained, the manager should keep in touch with any irregularities which may be disclosed in checking up the cost or book inventories by physical inspection of the stores or the stock room. Carelessness in charging out material, or in transferring it to other departments, or petty thieving may be the cause of these discrepancies. They should in all cases be investigated and corrected.

5. *Production reports.*—The management should also receive reports of production. The quantity of goods, or of classes, manufactured during the period, should be reported by departments, or by manufacturing functions, together with the unit cost. This enables the management to inquire into the causes of reduced volume of production, and locate and stop the waste.

6. *Sales analysis.*—Inasmuch as there can be no profit until the product is actually sold, the sales department becomes the balance of power in any business establishment. Accordingly, a study of successful business houses will generally reveal the fact that their success is due chiefly to: a careful study of markets; the training of salesmen; the building of sales arguments; and effective advertising.

Analysis of sales according to periods of time, territories, salesmen, branch offices, classes of goods, lines of industry, and the like, should always be available. Quite often, as this information is of a statistical na-

ture and not recorded in the books of accounts, it is overlooked. Too much emphasis cannot be placed upon the fact that if this information is properly presented and interpreted, it is bound to be a valuable fund of information for the progressive executive. To illustrate: If sales are not analyzed by territories and results are compared with a preceding period, it may be found that while the sales have increased in total, the firm has been losing ground in one section of the country, and gaining it in another. With analyzed information on sales before him, the executive is in a position to know in which territories the sales have decreased and to concentrate upon those territories.

In the same manner, a failure to analyze sales by the classes of goods will not reveal to the manager the particular lines which are selling and those which are not.

Care must be taken, too, that the information collected prove not too costly. However, the maintenance of a small statistical department, properly equipped with mechanical devices, will, in a large majority of cases, pay for the installation and the expense of operation in a short time, by reason of the valuable information disclosed.

7. *Expense schedules.*—In almost every business there are certain expense items which, if properly examined, will reveal much more information than might otherwise appear. It is, of course, advisable to provide a sufficient number of expense accounts in the classification of accounts so that items of like nature

only will be charged to a single expense account. When, however, this method has not been followed, it is advisable for the executive to require an analysis of the expense account. The miscellaneous expense account often becomes a very tempting hiding place for questionable items or improper outlays. In these statements are set forth the various kinds of expenses which make up the total of this account. They may reveal unsuspected leaks and be the means of stopping them.

Similarly, it is even advisable to attach certain definite earmarks to the expense account analyzed; thus, expenses for advertising and sales-promotion items should be analyzed, if possible, by classes of goods advertised. If this is done it is advisable to make a separation between advertising expense which can be definitely allocated to a given line of products, and expenses of a general advertising nature.

8. *Cash report.*—The manager should have a proper statement of cash on hand and in banks made to him daily. This statement should show the receipts, the disbursements, the balance at the beginning of the day, and the bank balances at the end of the day. Comparative figures for the preceding periods should also be included.

In connection with the cash statement there should be included a schedule of the maturing notes receivable and of notes payable. As already pointed out, no figure or amount is valuable by itself. The value of any information in a report lies chiefly in its relation

to other figures properly comparable with it. For this reason, all reports, whether daily or monthly, should give corresponding information for one or more preceding periods.

A statement of receipts and disbursements will give the executive a knowledge of the manner in which the business organization is handling its cash transactions. A comparison of results with several preceding periods will reveal the wisdom with which payments are made, and will indicate also whether or not financial difficulties have been encountered at different times.

9. *False statements.*—By false statements the author does not mean only intentionally misleading ones. They may include statements which have been prepared from insufficient records, or from records which do not present a clear view of the actual conditions of a business.

A misconception of a balance sheet may result from several different causes, of which the principal ones are: (1) vagueness of the terminology and use of technical words not readily understood by the layman; (2) improper accounting records on which the statement is based; (3) intentional misrepresentation of the management; and (4) improperly prepared statement.

It may be admitted that technical terminology cannot be entirely avoided. Therefore, the layman must make himself acquainted with the meaning of certain technical terms. But when terms of a controversial

nature are used, they should be made clear by descriptions. Certain lines of business will have accounts peculiar to the business, and while the technical phraseology in these instances cannot be entirely avoided, the meaning can be made more intelligible by means of an added description.

That an accounting system can always furnish absolutely accurate information in all cases, no one would contend. The reader has already been cautioned that the best that accounting systems can do is to reflect the scientifically prepared estimate of conditions. This uncertainty appears principally in connection with the valuation placed on assets. The difficulties encountered in this particular connection have already been touched upon in previous volumes and will be more fully discussed in this volume later. For the present it is sufficient to say, that where there are no outside criteria and no other means of comparisons with other forms, it is advisable to make a detailed study of each asset before one can pass upon the condition of a business as reflected in a given statement.

10. *Intentional misrepresentation.*—Misrepresentations which are intentional may be accomplished in a number of ways. Quite often they are the result of a combination of the false with just enough truth to make it seem reasonable. Absolute falsehoods can be detected directly. But the grouping of various accounts so that the good is put with the bad makes it difficult for any one to pass a correct judgment. No

knowledge of accounting principles will disclose this fact under ordinary conditions.

11. *Incorrect preparation.*—Misstatements, due to the incorrect grouping of accounts, the omission of pertinent information, and mistakes in inventory preparation or in pricing, will all result in false statements. Fortunately, however, the form of statement preparation is becoming so well systematized that errors of this nature will be easily detected. If it is borne in mind that there must be omissions among the various groups shown in any statements, a trained observer will easily detect false statements.

A statement that presents too favorable a condition should be questioned as closely as one that shows an unfavorable condition. By going back to figures and tracing them to their sources, one may often discover the errors.

If the profits of a particular department are unusually large the executive should examine the relative charges of the various groups of expenses. By comparing the relative percentages of profits in one department with the cost of similar departments, one may be able to pick out the section which has been misstated.

As a case in point, if the manufacturing costs of one firm were found proportionately less than the manufacturing costs of others in the same line, it would indicate that the cost had been arbitrarily reduced, or that the sales had been fictitiously increased without a corresponding increase being made in expenses. The

relation among the various groups of accounts will, as a rule, remain fairly constant in all firms engaged in the same line of business. If, therefore, the relationship is not the same, it indicates either false statements or inefficient management. A successful method of detecting such things is to make a comparison of the present period with that of preceding periods. As a rule, when a statement is incorrectly prepared, intentionally or otherwise, it will be obvious to the trained observer, because it is difficult to obtain relative amounts in all accounts.

12. *Preparation of statements for executives.*—Undoubtedly the best use for financial statements is to have them interpreted by the financial or accounting officer who is best fitted to take up that work. He will prepare a general summary of the condition of the business as a whole, in which he will call attention to the favorable and unfavorable conditions, as reflected in the statements themselves, and endeavor to trace these statements back to the departments where they originated.

This summary will give a detailed analysis of the business showing just what changes, if any, favorable or unfavorable, have taken place. As a rule, the attention of the board of directors will be called to the features which the interpreting officer thinks require attention, and to those departments which have made a relatively poor showing. Commendation will be given to the departments which have done especially well.

Because of his greater knowledge of accounting and his familiarity with the financial conditions of the business, the treasurer, or his assistant, is in a better position to analyze the condition of each department, as shown by the records, with perhaps greater success than any other officer.

Even at the present time, it is doubtful whether the great majority of business executives fully appreciate the importance of the accounting and statistical departments. To quote from Mr. James Logan, Chairman of the Executive Board of the United States Envelope Company:

> The processes of modern business are like the functions of a complicated machine and the executive must organize every part of his establishment as carefully as an inventor. Organization means running the machine with all its parts in harmony. The management of the large corporation is organized thought, exactly as a machine is the organized thought of the inventor. The executive must be a specialist along the lines which make for efficiency in administration. He must have the God-given quality—capacity for invention or organization. There is real invention in the field of organization and administration the same as in the field of mechanics. Efficient organization is an asset which counts for commercial and industrial success more now than ever before.[1]

REVIEW

In what ways can the accounts receivable be classified and tabulated so as to yield useful information to the manager?

What features may appropriately be included in an analysis of sales?

In what ways may error, whether arising thru mistake or thru

[1] The Library of Business Practice—Volume IX, p 59.

inadvertence, or thru intention to deceive, reveal itself in the financial statements?

For what should the executive look in a financial statement of his business?

CHAPTER IV

ANALYSIS AND INTERPRETATION OF INCOME STATEMENTS

1. *General divisions of the income statement.*—The income or revenue of a business undertaking is derived from the sales of its product or service, or from property which it owns. The income may be broadly classified as between primary income, sometimes called operating revenue, and secondary income, or non-operating revenue. The former represents income derived from the principal business in which the firm is engaged, while the latter consists of the income derived from the capital or property of the undertaking invested in outside ventures or controlled by others, such as interest on bonds or money loaned; dividends on securities; rents, sales of by-products or sales of scrap material, and so on.

As the reader has already noted, the expense of conducting the business includes the cost of materials consumed in producing the commodities or service which the undertaking offers for sale, together with the expenses incurred in selling the commodities or service, and the expenses of administration. The cost and expenses are also classified as between operating

expenses and non-operating expenses. Operating expenses comprise the total cost and expense of securing the primary income or the operating revenues. Non-operating expenses may be the cost of securing non-operating revenue and the cost of collecting it, or they may be expenses purely in connection with capital invested in other activities than those in which the business is principally engaged. For the purpose of illustrating the method to be employed in analyzing and interpreting the income account or statement of an undertaking, a typical income account of a manufacturing organization has been selected. The principles applied are equally applicable to a trading concern, or to any other form of business organization.

2. *Gross sales or gross income.*—All goods sold, whether for cash or credit during the period under consideration, will be credited to the sales account. This account should be credited with all valid sales which legally transfer to the purchaser the title to the merchandise disposed of. Sales made "on approval or return," or consignments shipped, should not be included as regular sales.

The sales record should disclose the amount of cash sales and sales on credit. This information will be valuable when considering the relation between the outstanding accounts and the total charge sales of the period. For example, if the annual sales on credit amounted to one million dollars, and if the sales for the different months were uniform, one would next consider what terms of credit are usually allowed. Let us assume that the average term of credit allowed

is thirty days, and that the balance sheet discloses $200,000 standing at the debit of trade debtors. The natural inference would be that either lax collection methods were being employed, or else that the amount standing at the debit of trade debtors included bad, doubtful and uncollectable accounts. In ordinary times there will always be a fair proportion of customers discounting bills, so that while the goods may be sold on an average term of credit of thirty days, the aggregate of customers' outstanding accounts should be less than the amount of two months' sales.

3. *Goods on sale or return.*—If goods have been shipped to customers "on sale or return," or "on approval," and have been credited to sales account and debited to trade debtors, the amount should be deducted from the sales as well as from trade debtors. The value of the merchandise in the hands of others should be shown as a part of the inventory. There should also be deducted, if necessary, a sufficient sum to take care of the depreciation of the goods while in the hands of others, waiting to be sold, and whatever sum it may be necessary to deduct because of shop-worn condition of goods, and so on.

4. *Trade discount on sales.*—When it is customary to allow trade discounts, a separate account may be kept for them. In this event, the credit to gross sales will be the gross price with an offset appearing in an account under the caption of "trade discount on

sales." It is sometimes urged that an account should be kept for the amount of the trade discount allowed on sales on the theory that such an account measures, to a certain extent, the efficiency of the sales manager. The sales manager who is able to keep up volume of sales with the smallest amount of trade discounts is naturally the most efficient manager. The author believes that this contention is of very little practical weight, and doubts the advisability of keeping this information, by reason of the time and labor necessary to do so.

5. *Price corrections.*—Any adjustments that must be made because of errors in invoicing goods or billing out at erroneous prices should be corrected by debiting or crediting the sales account, and crediting or debiting the account of the customer according to the character of the error. The correction of mathematical errors is to be distinguished from allowances made to customers because of claims for damages, or short weight, and the like. When a customer has received an allowance or a price concession of this nature, the amount should be debited to a sales allowance account. This is for the purpose of establishing a better control over allowances of this character which would otherwise be lost sight of if merged with the gross sales.

6. *Sales returns.*—In some lines of business, the item of sales returns is an important one. Business men everywhere are trying to minimize this evil. In order that control may be established over items of

this character so that the management may know at the end of the period what the relation is between sales and returns, all goods returned by customers should be debited to a sales returns account, and not to the gross sales account. It will thus be possible, at the end of the fiscal period, to determine just what proportion of sales are returned, and whether the evil is increasing or decreasing. A further analysis may be made to determine the amount of returns in each salesman's territory, as some salesmen will oversell their trade.

7. *Prepaid charges treated as sales.*—Business houses in some cases are accustomed to prepay freight, insurance and cartage, for the accommodation of customers, charging the amounts of these items in the invoice with the goods shipped. In many instances, these charges to customers are credited in their entirety to the sales account. This is bad practice, because it overstates the amount of the sales. The amounts charged to a customer for freight, insurance and cartage prepaid should be offset against the expense of the shipper in that connection. The sales account should not be credited with these amounts.

8. *Sales of scrap or residuals.*—Sales of scrap material, or of by-products, should not be credited to the regular account, but should be handled thru special accounts created for them. Against the income received from the sales of scrap or residuals should be offset the cost thereof, and the net profit from the

transactions should be taken into the income account as an item of miscellaneous income.

As has already been pointed out in the Text on "Accounting Practice," sales to branches, or transfers of merchandise among departments, should not be included in the sales account. The reader is referred to that volume for the detailed treatment to be given to transactions of this nature.

9. *Percentage calculations.*—The gross sales, therefore, as reduced by the amount of returns and allowances, constitute net sales. This is the amount which should be used as the base for all percentage calculations that are made on the basis of selling price. In this connection, it is pertinent to say that while probably the majority of business undertakings make the percentage calculations in the income account by using net sales as a basis, it is mathematically more correct to use the cost of goods sold or the cost of service rendered as a basis. One method is just as good as the other, as long as it is borne in mind that whatever basis is used, it must be consistently employed thruout. One must understand thoroly, however, whether the basis is cost of sales or selling price.

The reader may have noticed literature that appeared from time to time on the subject of percentage of profits, some authors insisting that but one of the methods of figuring the percentage of profit is correct, and others taking the opposing view. The important point that many authors overlook is that when the selling price is taken as the base, the base will vary

with the profits, since the latter are included in it. Yet it is recognized that the chief reason for making comparisons by means of percentages is to reduce the results to a common base.

To quote from Dawson's Compendium; [1]

This variation is, moreover, uncontrolled by any principle, being, in the case of a large proportion of profit, entirely disproportionate to the variation caused by a smaller rate of profit. As an instance, 10 per cent of profit computed upon the cost price is equal to $9\frac{3}{11}$ per cent when the same result is taken on the selling price, but if 50 per cent of profit on cost prices be computed upon selling prices it will only show $33\frac{1}{3}$ per cent. Furthermore, as the sale price is composed of the cost price and the profit, the latter cannot exceed the sale price, from which it follows that a profit based upon selling prices cannot exceed 100 per cent, nor even equal 100 per cent, if the goods have cost anything at all. None of these impurities or limitations exist in connection with a cost price percentage. Of course, a given percentage computed upon the cost will always show a certain other percentage if the same result as regards profits is computed upon selling prices, i.e., 10 per cent based upon cost is at all times equivalent to $9\frac{1}{11}$ per cent of the selling price: 50 per cent of cost is always equal to $33\frac{1}{3}$ per cent of sale price, and so on: Therefore, so long as the rate of profit is under 25 per cent, and does not vary greatly, comparisons of results based on selling prices will not be as misleading as they would be otherwise, and may be adopted without great danger, provided the nature of the base upon which they are computed is always borne in mind. It is often urged that a sale price percentage is adopted on the score of convenience, the *cost* of the articles being difficult to ascertain on account of the difference of stocks and other obscuring elements. But the *cost* incurred in respect of the sales effected can be obtained by a simple expedient as soon as the

[1] The Accountant's Compendium by S. S. Dawson, p. 466.

amount of profit has been ascertained. As above stated, the cost and profit combined equal the selling price—therefore, if the amount of profit be deducted from the net sales, the cost of the goods sold must be the result, quite independently of the questions of purchases, differences of stocks, etc.

The following extract will show that the *cost price* percentage is not only the true basis mathematically, but is also in accord with economic principles:—"The capitalist, then, may be assumed to make all the *advances* and receive all the *produce*. His profit consists of the excess of the produce over the advances; his *rate of profit* is the rate which that excess bears to the *amount advanced*." (John Stuart Mill.)

10. *Outward freight and cartage.*—The question as to whether outward freight and cartage paid by a firm for goods sold F. O. B. destination should be deducted from the selling price or treated as a selling expense, is the cause of considerable discussion. It would seem that if the general custom of the concern in question is to deliver goods F. O. B. destination, the amount may be very well treated as an offset to the net sales in this section of the income account. When, however, the allowances are not the general custom, but are under the direct control of the sales manager, it is better to treat the amounts paid for freight and cartage on shipments of goods to customers as a selling expense.

11. *Service liabilities.*—In certain enterprises it is customary for the service or merchandise to be paid for in advance. Thus, a gas company supplying gas to so-called "prepayment meters," or a restaurant or a railroad selling commutation tickets, will always

have a greater amount of revenue received for service or for merchandise than has actually been delivered to the customers. Therefore, all income or revenue received from this source may not necessarily be income of the present period. It will be necessary to determine by some fair and adequate means, what proportion of this revenue is to be credited to the current income account, and what proportion is to be set up as a deferred credit to income or deferred liability, representing the service liability to be delivered in the succeeding period.

12. *Instalment sales.*—When firms do business on the instalment plan, the sales account should be interpreted in the light of the practices of the firm, with reference to the provisions set aside for the loss on doubtful accounts and collection expenses in connection therewith. It is also important to note that the income account of the period under review has not been credited with a greater amount in respect of such sales than may be properly taken to the credit of income.

13. *Containers included in sales prices.*—Care must be used to see that the sales account does not receive credit for containers charged. Thus, in sales of certain chemicals, such as anhydrous ammonia, containers are charged with the merchandise to customers in the invoice. It is evident that the sales account should not receive credit for charges for returnable containers. A special reserve account should be opened for such credits and when, from time to time

containers are returned, the reserve amount should be debited for the amount paid out in cash or credited to the account of the customer. When the reserve is large, it is advisable to create a special fund for it to the extent of the debits to customers in respect thereof, collected in cash.

14. *Other items of miscellaneous income.*—Occasionally, extraordinary profits result from the sale of land holdings, patents which are of no further use to the enterprise, or other assets of which it may seem advisable to dispose. Such unusual profits should not be merged with the profits from business operation, because to do so would throw the operating revenues out of proportion and destroy the possibility of comparison. The proper practice is to state such items separately, under descriptive headings, and to carry them as miscellaneous income. Sometimes these items are of such an unusual nature as to constitute a direct addition to surplus and should not appear in the income statement at all.

15. *Comparisons of sales with the amount of the final inventory.*—In order to determine the efficiency of the management, it is well to make a comparison between the total volume of the sales and the amount of the final inventory. In making this comparison, however, consideration must be given to the length of time it takes to manufacture the goods. For example, if a concern has annual sales amounting to $1,200,000, and reports an inventory on hand at the end of the period amounting to $500,000, the indica-

tions on the surface are that the firm is carrying too much of an investment in stock in trade. This might appear all the more probable if it were known that the manufacturing process took approximately twenty days. The presence of this large inventory would indicate poor management in allowing stock to accumulate, or the presence of a large amount of dead stock, or an inflation of inventory values.

If the gross profit on trading operations were approximately the same in the period under consideration as in preceding periods, the question of the inflation of the inventory could be dismissed. Possibly, a quantity of dead stock, and goods out of style or fashion, may be included in the inventory at cost prices, or it may be that the firm has overestimated its requirements in the way of raw material, or may have manufactured too heavily, and thus has too much of its liquid capital invested in merchandise.

It is not safe to draw conclusions without a further investigation of the facts, for it may happen that a large proportion of the inventory is in raw materials which the concern has accumulated at advantageous prices for use in later periods. In other instances, business organizations accumulate stocks of raw materials in excess of their own requirements at advantageous prices, which enable them to sell some of the raw material to other less fortunate manufacturers.

The purchasing agent of one of the large public service corporations at the beginning of the Euro-

pean war purchased immense quantities of raw copper at prices varying from 14 to 18 cents a pound. A large part of the copper was subsequently sold to other manufacturers who had not anticipated their requirements, at prices substantially over cost. However, the comparison between the total sales and the final inventory ought to be made. In the light of other information one may judge whether or not the management is efficiently employing its liquid capital.

16. *Distinction between cost and expense.*—While all capital or value consumed in business operations is technically expense, the material and labor that enter into the manufacture of a product are usually known not as expenses, but as costs. General outlays in a factory, other than material and labor, while commonly known as factory or overhead expenses, are also a part of costs. The selling and administrative expenses form the technical expenses of a business.

This distinction between cost and expense is not very clearly defined, and frequently the two terms are used synonymously. The distinction is one of convenience rather than of necessity. The details of cost accounts have been covered in the Text on "Cost Finding." We are interested in them only in so far as they affect the preparation and interpretation of financial statements.

17. *Distinction between expenditures and disbursements.*—Business men in their dealings quite nat-

urally come to regard every transaction from a cash standpoint. Income from this point of view is held to mean the receipt of so much cash, and expense is not considered an expense until the money is actually paid over. True enough, all revenue, if collected, will ultimately be realized in the form of cash and all expenses will ultimately be paid in cash. But there is a fallacy in considering that at any particular instant of time, a business is entirely on a cash basis. Material may be received and consumed long before it is paid for, and it is often paid for long before it is received. On the other hand, sales may be made which will not bring in any cash for some time. Therefore expenses and disbursements do not necessarily synchronize.

18. *Elements of cost.*—The first element in the cost of the goods sold or in the operating expenses is the cost of the material consumed. This is found by adding to the inventory at the beginning of the period, the purchases during the period, and deducting from the aggregate, the amount of the raw material on hand at the end of it.

All transportation charges incurred in delivering materials and supplies upon the premises are part of the cost of such materials. The expense of the purchasing department is often distributed over the purchases made, a rateable portion being assigned to the materials consumed, and the balance to the inventory on hand at the end of the period and is thus carried as a part of the inventory value of raw ma-

terials. If an inspection department is maintained for the purpose of making tests of the quality of the material received, the expense of this department, as well as the expense of the receiving department, form an additional element in the cost of the material consumed. In other organizations it is customary to pass the raw material thru a store room, and in this event, a rateable proportion of the expense of operating the storeroom is assignable to each unit of merchandise.

In practice it will usually be difficult to assign definitely to each unit of materials or supplies consumed, a rateable proportion of the expense of operating the purchasing, inspection, receiving and storeroom departments. In many cases, the entire cost of operating these departments during the period is charged as an expense of the current period. When this expense is fairly uniform from period to period, there is probably no great error in following this practice, as it would not make any difference after the initial period.

19. *Treatment of cash discounts on purchases.*— Invoices for purchases are frequently subject to a special discount for prompt payment in cash. The question will arise as to whether the deductions made on the payment of invoices are to be applied to the credit of the materials purchased or are to be treated as secondary income. In favor of the first theory, it is urged that cost means the net cost to the purchaser, and therefore, the cost of raw materials, as

shown in the operating expense account, should be the cost less the cash discount received.

On the other hand, it is contended that the ability to take advantage of cash discounts arises solely from the power of the organization to command the capital necessary to enable it to do so. In fact, it may pay in many instances to borrow the funds necessary to discount bills promptly. Indeed in certain lines of business, the profit obtained from the discounting of bills is greater than the profit on the sale of the merchandise. If a firm could not borrow the money with which to discount bills, or if it did not have a sufficient amount of owned capital, it could not secure this advantage. The advantage is therefore one which arises solely because of the presence of a sufficient amount of capital, either owned or borrowed. If money has been borrowed for this purpose, the cost of the borrowed funds will appear as a deduction from income, or as a non-operating expense. It follows then, that the saving made in discounting bills with borrowed funds ought logically to appear as non-operating income, or as other income. The author favors the second method of treatment.

20. *Labor.*—Labor is the cost of the human service rendered in manufacturing the goods, or in producing the service rendered by the undertaking. The amount charged for labor should include not only the sums actually expended in cash, but also the amount of labor service rendered which may not have been paid for at the date of the accounting.

21. *Heat, light and power.*—The cost of fuel used in developing the heat, light and power, including freight paid on the coal, the unloading charges thereof, and the cost of bringing the fuel to the point at which it is to be used, figure in the heat, light and power account. In a large manufacturing establishment, there is usually employed a gang of day laborers, sometimes known as roustabouts, who are engaged in various odd duties, among which is that of hauling the coal from the storage pile to the stokers or to the boiler room. The amount of labor devoted to this purpose is to be charged to the fuel account. All water used for feed water should also be charged to this account. A rateable proportion of the engineer's services expended in the supervision of the boiler room should figure in this account and this is obviously true of the wages of firemen, tenders and oilers.

Many firms keep a heat, light and power account as a clearing account, and distribute it upon some equitable basis at the end of the accounting period over the departments which have received the benefit from it. Thus, for example, if live steam is furnished to any department, it is possible to instal flow meters to determine the amount delivered as a basis for the charge. The various departments will be charged for light on the basis of candle power used in the respective departments. Heat will be charged for on the basis of the radiation surface. In this manner an attempt will be made to distribute the en-

tire amount charged to heat, light and power to the various departments which have received the benefits of these services.

Other elements of overhead expenses have been fully explained in the Text on "Cost Finding," therefore no detailed analysis is given here.

22. *Cost of manufacture and cost of sales distinguished.*—The difference between the cost of goods manufactured and the cost of goods sold should, however, be pointed out. In arriving at the cost of goods manufactured, we start out with the initial inventory of raw material and work in process, and add to the aggregate of these amounts, the total purchases, labor and factory expenses incurred during the period. From this aggregate we deduct the amount of the inventory of raw materials and work in process at the end of the accounting period. The resultant is the cost of goods manufactured.

The cost of goods sold during the period, is found by applying to the cost of goods manufactured, the difference between the inventories of finished goods at the beginning and at the end of the period. Starting with the inventory of finished goods on hand at the beginning of the period, we add the cost of the goods manufactured during the period, and deduct the value of the finished goods on hand at the end of the period. The resultant will be the cost of goods sold. Or, to express it in another way, to find the cost of the goods sold, take the total purchases and add to them the labor expended and the

factory expenses during the period, and adjust the aggregate by the difference between the initial and final inventories of raw materials, work in process and finished goods, adding to the aggregate found above, all decreases in inventory and deducting all increases in inventory.

23. *Percentage calculations must be made on correct basis.*—The difference between the income from sales and the cost of the goods sold is the gross profit on sales. As already shown, the percentage of gross profits on sales may be calculated by using as a basis either the cost of goods sold or the income from sales.

The reader has already been warned in a preceding chapter, that percentage calculations generally should be made with care. Percentage calculations should not be made unless the conditions are such as admit of correct averages being taken. As a concrete illustration, in the distribution of overhead expense on the monthly basis, inasmuch as the base upon which the calculation is made will vary from month to month, the percentage distributions will do likewise. If a calculation is made upon the aggregates of a quarter, different rates of percentage will be obtained than if the calculations were made monthly. This is true because the basic facts in each of these cases are different. Hence, care must be used in making percentage calculations to see that the facts prepared on the percentage basis are capable of accurate comparison on that basis. When the percentage of gross profit has been ascertained, by whatever basis it may be cal-

culated, the cause of any increase or decrease should be inquired into.

24. *Calculation of the turnover.*—The turnover of capital invested in stock in trade is calculated by dividing the cost of the goods sold either by the initial inventory or by the average inventory for the year. Starting with the initial inventory, we add to it the purchases in a trading concern or the cost of manufactured goods in a manufacturing business, and deduct from the aggregate so found the inventory of goods on hand at the end of the period. It will be seen that this resultant is the material cost of the goods sold during the period. Divide the cost of the goods sold either by the initial inventory or by the average monthly inventory and the resultant will be the turnover, or the number of times which the capital invested in goods has been turned over during the period. Where the monthly inventories fluctuate or where the initial inventory may not be a fair one to use, it is better to take the average monthly inventory as the divisor.

The ability to turn merchandise quickly indicates good management. Manifestly, a man who can turn his stock four times in a year has made more on his capital investment than the man who has been able to turn his stock only three times. Snap judgments, however, cannot be based on the turnover. There may be good and valid reasons why the turnover is reduced, and all the facts surrounding each individual case must be carefully considered. A large increase

in inventories will naturally have a tendency to reduce the turnover but, on the other hand, this might be offset by realizing a greater margin of profit on the goods that were sold. At any rate, a comparison of the turnover with that of preceding periods, and in connection with the increase or decrease in the gross profit from sales, will prove interesting.

There is, too, a danger in attempting to increase the turnover by reducing the amount of the inventory carried, because in certain instances, the seller may not be able to keep his stock complete at all times. He may lose sales thru not having the goods on hand at the time that customers order them because he is over-anxious to keep the stock down to the lowest possible limit. Delays are often encountered in the receipt of merchandise, and a merchant who has lost the opportunity to make a sale because goods are out of stock has lost profits that he may never recover. On the other hand, laxity in this respect may also result in a loss, for it is evident that too great an amount of capital invested in goods on the shelves may eat up all, or a part of the profits, thru interest charges. Past experience will usually enable the management to determine the lowest limit to which it may safely allow the stock to be reduced.

REVIEW

What should and what should not figure in a statement of gross sales? How are net sales derived from them?

State the arguments for basing the per cent of profit upon the cost price, and upon the sales price.

What deductions are drawn from a comparison of total sales and final inventories? What cautions must be observed in drawing conclusions?

Distinguish between cost and expense, expenditures and disbursements.

Describe what enters into the heat, light and power account, and what purposes this account serves.

What are the rules for calculating the turnover, and what is the importance of the turnover?

CHAPTER V

ANALYSIS AND INTERPRETATION OF INCOME STATEMENTS (Continued)

1. *Quantity discounts on purchases.*—When quantity discounts on merchandise purchases are received, it is advisable to record them in a separate account and not to merge them either with purchases or with purchase allowances. All quantity discounts that have been earned during the period should be included in the accounts even tho they have not been received in cash. If this is not done, the income account in the next period will receive the benefit of such rebates at the expense of the preceding period.

Separate accounts should also be kept for raw material purchases and for finished parts purchased. It is unnecessary here to discuss more fully the purchase of materials as between direct and indirect material, because these matters have been treated in the Text on "Cost Finding." The technical distinction between these classes of material is of little importance to us for present purposes except in so far as it affects the comparisons.

2. *Purchase returns and allowances.*—As in the case of sales, purchase returns and purchase allow-

ances should be separated. While the information to be disclosed from these accounts is not so valuable as that resulting from the same practice when applied to the sales, yet the information is likely to prove of interest. Furthermore, no additional labor is involved in recording the information in detail.

3. *Maintenance charges.*—Repairs and renewals of factory equipment, and operating and depreciation charges in their relation to the cost of goods sold, have already been fully discussed in the Text on "Cost Finding." The important point to be noted in this connection is that in a comparison of income statements over a series of years, the elements must be carefully compared to see whether or not there are any increases or decreases worthy of note. If so, investigation should be made to determine their causes.

4. *Selling expenses.*—All the expenses of marketing and of distributing the products are included under selling expenses. Among the items to be found in this group will be the salaries of the sales manager and his assistant, the salaries and traveling expenses of the salesmen, and the commissions allowed on sales actually made. The full amount of such expenses as have accrued during the period should be charged against the income whether or not they have been liquidated in cash. The amount paid for the rent of storerooms or warehouses for finished goods is properly chargeable to this group of expenses.

Advertising expense and promotion expense in developing new business are usually grouped under the

caption of advertising. Included in this amount will be the salaries and expenses of the advertising manager and his staff. The account will also include the cost of printed catalogs and advertising literature, together with the expense of advertisements in newspapers and magazines. For the balance sheet it is usually considered proper to inventory at cost, the amount of advertising literature on hand, and to treat as an inventory, space contracted and paid for in advance, thereby reducing the amount chargeable to the expenses of the period under review. The question as to whether or not any portion of the advertising expense in connection with a national advertising campaign should be treated as an asset will be discussed in a later chapter.

5. *Rebates allowed to customers.*—Let us assume that a sewing machine manufacturer makes an allowance to a customer for an old machine, agreeing to take the machine at a price considerably in excess of its residual value, or in excess of its value for rebuilding. The question arises as to the disposition to be made of the difference between the exchange price allowed to the customer for the old machine and its residual value, or the value for rebuilding purposes. Should this be treated as a deduction from the net sales, or as a selling expense? It is usual to allow the sales manager an appropriation each year for this purpose, within which he must work. Inasmuch, therefore, as the item is one under the direct control of the sales manager, it seems proper to charge

to selling expenses the loss sustained on amounts allowed to customers on exchanges.

Moreover, there is an element of advertising in the transaction, because when Mrs. Smith shows her New Era sewing machine to her neighbor, Mrs. Jones, the latter will probably decide that she will have to buy a new machine also, and an additional sale results.

On the other hand, when there is no advertising feature connected with the rebate allowed to a customer, or when the matter is beyond the control and jurisdiction of the selling department, rebates may be more properly treated as a deduction from sales before arriving at income from sales.

6. *Other selling expenses.*—All devices for securing trade are properly chargeable to this general group of selling expenses. The loss on restaurants in department stores is frequently charged as advertising expense; the costs of lectures or fashion reviews or daily concerts are charged to the same account. One department store follows the practice of charging the advertising account and crediting the expense of operating its stable and delivery department with a fixed annual charge for advertising, because the delivery wagons carry notices of special sales, from time to time.

7. *Distribution of stable and delivery expense.*—The stable and delivery expense is quite commonly pro-rated between incoming freight and outgoing freight upon a tonnage basis, or upon some other equitable basis. The problem of distributing de-

livery expense is somewhat complicated, especially in a department store. The problem of internal expense distribution is one of cost finding, primarily, and needs no further discussion at this point.

8. *Administrative expenses.*—The next group of expenses are those which have to do with the management of the enterprise. They are made up of the expenses which cannot be directly apportioned, either to manufacturing or to selling activities. As a matter of fact, however, administrative expenses are usually for the benefit of both the manufacturing and the selling departments. It is of importance to know that the cost of supervising the establishment is in proper relation to the cost of manufacture, the selling expense and the amount of the sales. Included in this group will be the salaries, traveling and incidental expenses of the general officers and of the general office clerks; office supplies and expenses; the rent of administrative offices; the outlay in stationery, printing, telephoning, telegraphing, cabling; legal expenses which cannot be properly provided for elsewhere, and those miscellaneous and general expenses that cannot be properly allocated to any individual department or function.

The depreciation of the office furniture may also be properly charged to this group of expenses.

9. *Selling profit and net profit from operation.*—The deduction of the selling expenses from the gross profit on sales gives us the selling profit. By deducting the administrative expenses from the selling

profit we arrive at the net profit on operations, or as it is sometimes called, net income from operation. The three important factors to bear in mind are: (1) the amount of the gross income from sales, (2) the cost of the sales, including administrative expenses, and (3) the net income from sales. For the sake of brevity, we will hereafter refer to these three elements as the gross income, the operating expense, and the net income.

10. *Effect on gross earnings.*—The gross earnings will immediately reflect a decline in prosperity. This is especially true in the case of a manufacturing or trading concern; this decline is not so marked in the case of a street railway or public service corporation. Nevertheless, railroads immediately feel the effect of a business depression because of the reduced volume of freight earnings and the lessening purchasing power of the public. It is, therefore, of importance to attempt to measure the probable effect of business depression on gross income, and also to attempt to forecast the future business outlook.

11. *Operating expense is not easy to reduce.*—Operating expenses do not, as a rule, decline in the same ratio as gross income. This is due to several causes: first, wages are usually the last thing to be reduced; second, a concern that has planned to manufacture a certain output and has built up an organization for that purpose will always have a certain amount of overhead expense which must be carried in dull times as well as in prosperous times; third, the

cost of materials, both direct and indirect, does not usually decline with the same rapidity as gross income. Therefore, unless the organization prunes very heavily the maintenance expenses and the allowances for depreciation, the net income is likely to decrease in a greater ratio than the gross income.

If the organization in attempting to reduce its operating expenses and thereby increasing the net income, has neglected to make necessary expenditures for maintenance, repairs and renewals, the earnings of the period will be overstated, and the cost of making good the deferred maintenance and renewal charges will have to be borne by later periods.

12. *Interpretation of net income.*—From the net income the fixed charges of the corporation for interest, sinking fund requirements, if any, and dividends must be met. If too great a proportion of the gross income is used in operating expenses it is possible that the net income may be insufficient in amount to meet the fixed charges of the firm. Bondholders require the assurance that the net income will amount to at least twice the sum required to pay interest on bonds and other fixed charges. Experience has proved this proportion to be a proper margin of safety.

In the case of a corporation a decline in net income may mean that stockholders will have their dividends reduced. If the corporation in its prosperous period, has set aside a surplus or dividend equalization reserve, the dividends may be paid in part out of sur-

plus created in this way. The distribution of any part of this locked-up surplus will reduce the working capital of the organization. It may, too, have a tendency to increase the outside borrowing, perhaps even to weaken the concern so that it will not be able to take advantage of market conditions in the purchase of raw materials, or in discounting all of its bills.

The reader will perhaps now more fully realize the effect on the income account if capital items are charged to the revenue account, or if revenue items are charged to capital. In the first case, a dishonest board of directors might "freeze out" debenture bondholders, or depress the price of stock to the disadvantage of the holders. In the latter case, an appearance of apparent prosperity might be continued for a number of years, with the result that after a period of time, a drastic reorganization and a scaling down of bond and stock issues become inevitable.

Sole traders and members of partnerships are, of course, equally as interested in comparison of gross and net income as are members of a corporation.

13. *Other income and income charges.*—Dividends on stock owned or interest on bonds owned; interest on any mortgages receivable; cash discount on purchases; interest on notes, accounts or on bank deposits; rent, royalties or commissions received are included in other income. In fact, any item of income received other than that from the sale of the product, or from the service which the organization offers or renders for sale, would be taken into this

section of the income account. When any expense has been incurred directly in securing this income, it is customary to state in the income account the excess of the income over the expense of securing it, ear-marking the item "net" in the income account.

Expense incurred for interest on borrowed funds, cash discounts allowed on sales of merchandise, payments of rent, insurance, taxes or royalties would be included under income charges.

14. *Treatment of taxes and rent.*—There is considerable difference of opinion among accountants as to the character of the items that should be carried under taxes and rent. Some authorities take the view that taxes and rent paid for a factory building should be charged as a part of the manufacturing expenses. Others hold that since taxes are sums paid for the protection of invested capital, the amounts paid are capital expenses and therefore have nothing to do with operating expense. It may be pointed out that operations are conducted just as efficiently in owned as in rented property. Moreover, a decision as to whether or not an organization shall own or rent its own plant, rests with the executives and not with the operating department. These questions are matters which each organization must settle for itself.

15. *Cash discounts on sales.*—Discounts which are allowed to customers for the prompt payment of their accounts are also viewed from two standpoints. One is that discounts are offsets against the sales prices and should be deducted before stating income from

sales; the other that the transaction is a purely financial one and that the allowance made for the prompt payment of customers' accounts reduces the necessary borrowing by the firm, the risk of loss on bad accounts, and collection expenses.

16. *Insurance expense.*—Insurance expense is also the subject of much debate. Those who favor stating the insurance expense in this section of the income account call attention to the fact that it is a sum paid for the protection of capital, and therefore a capital expense. Others hold that this expense should be allocated to the individual operating functions, namely, fire insurance on the factory together with liability insurance on employes should be charged as one of the necessary and incidental expenses of manufacturing; the insurance paid on the stock of raw materials must be counted in the cost of producing the finished product, etc. On the other hand, attention is called to the fact that insurance rates are totally out of the control of the operating officials. Moreover, in view of the fact that insurance is a contract of indemnity which protects the capital investment of the organization, it is a capital charge and should be shown as a deduction from income.

To the income from operations will be added the amount of the secondary income received, and from this aggregate will be deducted the amount of the income charges. The resultant will be the net income for the period which amount is subject to still further adjustment.

17. *Profit and loss credits and charges.*—Items of miscellaneous income that do not occur with sufficient regularity to be shown under the heading of other income such as miscellaneous income or profits from the sales of assets or scrap material would appear under profit and loss credits and charges.

On the other hand, there would be charged losses due to bad debts, depreciation provisions that could not be allocated against operating functions, and any other item of unusual or extraordinary loss suffered during the period.

Extraordinary income or extraordinary losses should be apportioned among periods; that is, any portion of income received or any loss sustained which does not apply to the period under review should be adjusted thru the surplus or deficit account.

In analyzing an income account care should be taken to see that the fixed charges are not in excess of the net income from operation. Occasionally, it will happen that a business organization has extraordinary sources of outside income, and in a year in which the net income is not sufficient to meet the fixed charges, the income from outside sources will be added to the net income from operations and the fixed charges deducted from the aggregate. This results in a misleading statement because it attempts to conceal the fact that the business has not earned enough net income from operations to pay its fixed charges.

The effect of the sinking fund reserve requirements,

as well as other reserves, and their respective relations to the income account are discussed in later chapters.

18. *Transfer of net profits.*—In a corporation the balance of net profit is transferred to the surplus account and remains as a contingent reserve or as a working capital of the business. From the surplus will be set aside various reserves. In some cases dividend equalization reserves are created, so that if in any year, the profits from operation are not sufficient to enable the corporation to pay the usual dividend, the dividend equalization reserve may be drawn upon. The balance is available for dividends, but it is not usual to distribute all the net profits of any one year. The dividends distributed are deducted from the surplus account and are shown as surplus adjustments. The net profits of sole ownerships and partnerships are added to the owners' capital accounts.

19. *Deficits.*—If the costs and expenses of a year have been greater than the total income received from all sources, the operations for that period have resulted in a deficit. If a corporation has a surplus created from prior periods, the deficit from operations in the current period will, of course, be charged against it. If the surplus is still sufficient to allow the payment of the usual dividends, the board of directors will, in all probability, make the usual distribution. If no such surplus exists, however, the capital is said to be impaired. In other words, a loss has resulted in the net worth or in the proprietorship.

In partnerships this reduction in the proprietorship is a direct charge against the partners' accounts. The loss from operations of a sole trader is charged to his capital account. However, in the case of a corporation, inasmuch as it cannot reduce its capital stock without conforming to certain legal formalities required by the statutes, it must set up a deficit account which by its title should clearly indicate that the capital has been impaired. Corporation officials will, in certain cases, go to almost any extreme to avoid showing a deficit. This may be accomplished by neglecting to make the usual expenditures for the maintenance and renewal of the operating plant, or by erroneously charging to capital, items that should properly be borne by revenue. It is therefore important when analyzing an income statement to use great care in making comparisons with previous years when there is any likelihood of this practice being followed.

20. *Analysis of surplus fluctuations.*—The conversion of a deficit from operations into a surplus in the succeeding period should also be carefully inquired into. This might in some instances be brought about thru an inflation of the inventory. If a comparison of the inventory values stated in the balance sheet showed that the inventory had increased in a much greater degree than the increase in the payable accounts, or notes, or the decreases in assets which might have been used to finance the purchase of the inventory, and if, at the same time, a deficit had been

converted into a surplus, the inference might fairly be made that an inflation of the inventory was responsible for the conversion of the deficit into the surplus. Comparisons with preceding periods will usually reveal practices of this sort. An examination of a single balance sheet or of a single income account is therefore of little use. The financial condition and the results of operation should always be studied in comparative form.

REVIEW

Enumerate the various items which may enter into selling expenses. How is their exact amount determined?

Distinguish between administrative and selling costs, and explain how they are treated in the accounts.

Upon what does net profit from operation depend, and what general influences determine its fluctuation?

What are some of the more usual charges against income from operation before net income can be ascertained?

Describe methods by which deficits in the operations of corporations are covered up in the books.

CHAPTER VI

CONSOLIDATED INCOME STATEMENTS

1. *Introduction.*—Modern developments have brought forth new forms of business organizations, each of which has features peculiar to itself. The accounting system and the form of financial statements adopted by the various types of business organizations should provide a clear record undisturbed by any unusual features of organization. As in any science, the general principles of accounting practice are fixed and remain constant under all conditions. The proper method of applying these principles, however, will vary with the individual conditions of each undertaking and the type of development which it portrays. Therefore, a discussion of consolidated statements must be prefaced with a clear understanding of the nature of these new forms of organization, the results of whose operations can best be disclosed thru the use of consolidated statements.

2. *Distinction between parent and holding companies.*—There is a financial, tho not a legal distinction between a parent and a holding company that is not always understood. A parent company is an operating company doing business under its own name and controlling, thru a majority of stock

ownership, one or more corporations doing business in lines allied to its own. The subsidiary companies are new corporations, organized by the parent company, which retains stock control for itself and sells the balance of the stock, if need be, to secure either working capital or local stockholders.

A corporation holding a valuable patent may organize subsidiary corporations which are practically selling or manufacturing agencies. The parent company will lease the patent rights to the subsidiaries for use in certain territories. The parent company will retain at least the majority stock ownership in each subsidiary in exchange for the territorial rights in it. At the same time, the parent company may be engaged in business in all territories not leased. When all territories are leased, the parent company will cease to be an operating company and will then become a holding company of the pure type.

The holding company is not as a rule, an operating company, altho in some cases it may be. Its principal assets are the stocks and bonds of corporations which it controls thru a majority ownership of the stocks of the underlying companies. Frequently it may not even possess office equipment as its principal office may be that of one of its subsidiaries.

The central distinction between the two types of companies is that a parent company organizes and establishes its own subsidiaries. The holding company acquires the ownership thru stock control of corporations already in existence, and is organized

primarily for the purpose of acquiring such stocks and thereby establishing a community of interest.

In the discussion which follows, the term "holding company" will be used in a general sense to include any type of combination involving stock control which one corporation exercises over other corporations. The principles of accounting involved remain the same whether the group is of the holding or parent company type.

3. *Ownership of the stock of a company does not mean ownership of its assets.*—Let us consider the legal phases involved in this type of financial organization. The first point to be noted is that under the law, ownership of stock does not mean ownership of assets. Thus, if corporation "A" owned all the stock of corporation "B" it would not be the *legal* owner of corporation "B's" physical property. The title to corporation "B's" physical property rests in the artificial person, corporation "B," and it can only be divested of that property by due process of law.

Corporation "A," therefore, is in the same position as any other stockholder of the corporation. The right of a stockholder in the assets of a corporation is only equitable. The ordinary form of common capital stock is not redeemable and the stockholders, while having the right to transfer their holdings, cannot re-exchange their stock for the assets which they surrendered to the company in the original exchange for the stock.

Moreover, it has often been decided in the courts, that the income or profits of a corporation cannot be secured by a stockholder unless thru a formal action of the Board of Directors distributing them in the form of dividends. Therefore, we see that while a stockholder has an equitable right to the surplus assets of the corporations whose stock he holds, he has not an enforceable legal right to secure any portion of them until either the Board of Directors has formally voted a distribution of them, or until the corporation has taken the necessary legal steps to dissolve its existence.

4. *Increase in value due to economic conditions not to be recognized.*—From the technical accounting standpoint, it is considered improper to give effect in the balance sheet to the increase in value of any fixed asset due to economic conditions. This is especially true if such increase is to be credited to surplus and made available for dividends.

Thus, we say that a corporation should not increase the value of its plant land on its books, even tho it is reasonably sure that the land is worth more than when originally purchased. There is no intention of making a sale and therefore the profit cannot be realized and the increase in value should not be credited to the profit and loss or to the surplus account. Hence it would follow that, according to our conception of income, profits actually distributed, or dividends actually received by a stockholder, constitute his sole source of income. Earnings not yet paid

out in dividends have no legal existence as income of the stockholder.

The law does not prohibit a stockholder from carrying, as income, dividends which his company has declared out of capital. True, he may be called upon to return them if such dividends result in the defrauding of creditors, but if they merely involve impairment of capital, dividends can apparently be treated as income by the stockholder. In this connection, it should be noted that it makes no difference whether the stockholder owns one share or ninety-seven per cent of the stock of a company.

5. *A balance sheet should disclose financial condition.*—From a technical accounting standpoint, the balance sheet of a business purports to show the assets which it owns and the liabilities which it owes. Thus, in the case of a holding company, its principal assets would be the stocks and bonds of its sub-companies; its liabilities would probably consist of notes payable and collateral trust bonds or notes which have as security, a pledge of the stocks and bonds of its subsidiaries. Happily, the science of accounting is not hedged in by narrow bounds. It is ready to forsake the old for the new when anything is to be gained in clearness, economy or convenience by so doing.

6. *The accountant and the law.*—Frequently, an accountant is compelled by law to do things which he knows are wrong. In common with his fellow men, however, he submits to the law. On the other hand, where he is not absolutely limited by the law, he

adopts those methods which he knows are correct according to the principles of his science.

The law, after all, is nothing more than the crystallization of human experience in the form of written enactment. When a custom or a practice becomes sufficiently well established among men, it is recognized and sanctioned by an enactment.

7. *Accounting practice and the law at variance.*— The accountant has always recognized the distinction between revenue and cash, between expense and disbursements. The law, even to this day, does not always recognize that distinction.

The accountant has recognized the necessity of providing for depreciation before determining the net profits of a business organization. There have been numerous court decisions in which a provision for depreciation before the ascertainment of net profits was disallowed.

The process of educating legislators, courts and a large number of business men in accounting methods has been a slow and laborious one for the accountant, but happily, the results of his labors are already beginning to bear fruit. Many of the principles which have been rejected heretofore by legislators and by judges have been embodied in the law thru the rulings of public service commissions. If, therefore, the accountant proceeds along the lines of correct principles, and uses scientific methods in the attainment of his desired ends, the fact that current legal doctrine or opinion does not support him, is of small impor-

tance. He therefore justifies himself in preparing financial statements for organizations of the holding company type which have no basis or standing under our present legal doctrine.

8. *Pertinent facts which should be shown in financial statements.*—The accountant clearly recognizes that in preparing financial statements for any organization he should present all the pertinent facts about the financial status and the result of operation of the organization. If he finds that the presentation of a statement of assets and liabilities of a holding company as shown by its books, or the income account of a holding company as shown by its ledger, does not truly state the facts, which are of interest and importance to the stockholders, he must present the information in such form as will properly disclose the facts. The accountant clearly recognizes that from the point of view of the stockholders of the holding company, the legal network of subsidiary organizations is pure fiction. The stockholders of the holding company are not affected at all by the relation existing between the holding company and its subsidiaries, or between the subsidiaries themselves. The relation which the entire group has to outsiders, creditors and bondholders, alone are matters of vital importance.

9. *Statements in form of balance sheets and income accounts.*—Realizing that the balance sheet and income account of a holding company does not sufficiently show the relation of the group of companies

to outsiders, the accountant prepares a statement to convey this information. These statements take the form of combined balance sheets and income accounts; the former set forth the combined assets and liabilities, eliminating inter-company transactions, and showing only the liabilities and capital stock outstanding, due to or held by, the public. Inter-company sales and purchases are eliminated, and only those purchases and sales made by the group of companies from or to outsiders are included. Many difficulties are encountered in the preparation of such statements, and some of these will be considered in the present chapter and in a later chapter dealing with a consolidated balance sheet.

10. *Financial results stated by means of consolidated statements.*—We therefore see that while no existing law would compel a holding company to have its financial statements made up in the manner universally agreed upon by accountants, and while we see also that there is no justification in law for the preparation of such statements, yet a logical application of the fundamental principles of the science of accounting requires that the financial results be stated thru the means of consolidated statements. These results should be stated in such a manner as to show the income of the aggregation, eliminating inter-company transactions, and to show also the financial position of the aggregation in so far as it is affected by the rights of bondholders, trade creditors and minority stockholders.

11. *Consolidation of statements.*—In passing, it might not be amiss to point out, that consolidation of statements and consolidated statements are entirely dissimilar. A consolidation of statements results when a combination of several existing companies is contemplated. The promoter of this combination wishes to know how the consolidation will work out and what will be the probable condition of the new combination. A consolidation of statements is simply the totaling of all items on each individual balance sheet into one combined statement, showing the condition of the companies if they were to be consolidated. In short it is a mere mathematical operation.

Consolidated statements, on the other hand, are prepared periodically after the combination has been formed, to show the progress that has been made by the group as a whole. Their preparation brings up many new and interesting questions. Some of the problems involved are similar to those discussed in the chapter on branch accounts in the Text on "Accounting Practice."

It will be evident, then, upon reflection, that the balance sheet or income statement of a holding company alone would simply show its own activities, together with such earnings as are received from the dividends distributed by subsidiaries, and the interest earned on the bonds of subsidiaries. This is not sufficient information for those interested in the holding company. Many changes—good or bad—may have

taken place in the group which would not be reflected in the holding company's statement.

12. *Factors not disclosed except thru the medium of consolidated statements.*—There are many possible factors which might be entirely overlooked in examining the financial statements of holding companies prepared in this manner. A brief consideration of some of these will give evidence of the futility of such a course. In this connection, it may also be mentioned that there will be much data regarding the condition of the subsidiary corporations themselves which will not be disclosed by their own individual statements. Moreover, certain other factors will not be clearly in evidence even if one examines all of the statements at one time—that is, if the financial statement of the holding company and its subsidiaries are available for comparative examination. The multiplicity of items and the difficulty of following intercompany transactions thruout their course renders such a practice of little value.

13. *Division of profitable business.*—Some of the possible manipulations which might be practiced by dishonest management may now be mentioned. The executives of the holding company may turn over all the remunerative business to one subsidiary, and all the non-paying business to another. In this way, especially if there was a large majority in the company to which the non-paying business was turned over, it might be possible to wreck the second company. Or the holding company might be loaded with

the non-paying business only. If the directors owned considerable stock in subsidiary corporations and had but a small interest in the holding company, they would draw large dividends from the subsidiary company and stand but a small part of the loss of the holding company. Again, as more frequently happens, the management might turn over all the unprofitable business to a subsidiary which would show a loss in operaton, while the holding company handling all the paying business would be able to show large profits. This would result in another sort of misstatement. The holding company's account would indicate that a profitable business was being done, and the investors would not know of the bad conditions of the subsidiary company.

14. *Dividends out of capital may remain undisclosed.*—Dividends might be received from a subsidiary company which would be carried as income on the books of the holding company. It might happen also that such dividends were declared out of capital. The accounts of the holding company might give no evidence of this fact which would be difficult to discover from the separately stated accounts of the subsidiary company. On the other hand, dividends might be withheld from the stockholders of the subsidiary companies thru the majority control by the holding company, even tho the subsidiary could well afford to pay them. This would result in depressing the price of the holding company's stock thru reduced earnings, and would enable the directors or stock-

holders who were aware of the facts, to acquire the holding company's stock at low prices.

15. *Advances to subsidiaries.*—Advances are often made by the holding company to a subsidiary and the subsidiary may in turn control other organizations to which it advances money. These advances may be carried upon the books of the lender as accounts receivable, current advances, or notes receivable, if the advances are represented by notes. The debtor corporation may have invested the funds in fixed assets, or it may be the intention of the debtor to liquidate the advance thru an additional issue of its capital stock or bonded debt.

It is evident that such advances are, in no sense, current assets. Or, what may be even still more unfavorable, the advance may have been made to the debtor corporation for the purpose of making good the operating losses. To any one examining the balance sheet of the creditor company, it would appear that the creditor company had a much larger fund of current receivables than was actually the case.

16. *Failure to provide for operating losses of subsidiaries not apparent.*—Still another form of misstatement that might be indulged in would consist of having the holding company receive as dividends, or even largely over-state, the profits of the whole group by declaring dividends from those sub-companies which had made profits, while failing to charge the income account with the proper provision for losses

which may have been sustained by other companies of the group. All of these factors contribute chiefly to the changes in the market prices of the capital stock of the holding company. By presenting information which is not in accordance with accounting principles the management would be enabled to mislead the public, bringing about fluctuations in the price of the holding company's stock tho not actually violating the law.

17. *Balance sheets should be consolidated.*—The failure to consolidate the income accounts of the subsidiaries probably does not result in as great disadvantage as would the failure to consolidate the balance sheets. The failure to eliminate inter-company sales and inter-company purchases would of course result in an overstatement of purchases as well as sales. The failure to eliminate the inter-company profits represented in the inventory would naturally result in an overstatement of the profits for the period, because it will be realized that the inventory is an essential and important part or the income account.

Likewise all inter-company construction work performed by an affiliated company, and prepaid expenses of inter-company origin, should be carried in the consolidated statements only at cost, net of any inter-company profit. The expenses of one company are set against the earnings of another and both are eliminated from the consolidated statement. The

working papers required to prepare consolidated income accounts are made up practically on the same basis as those covering the consolidated balance sheet illustrated on pages 247, 248.

18. *Inter-company transactions.*—To illustrate how these inter-company transactions are eliminated from the inventories, construction accounts, etc., in the consolidated income account, we shall suppose that a holding company controls, among other concerns: a mining company, "A"; a steamship line, "B"; a steel company, "C"; a railroad, "D" and a rolling mill "E." The mine produces ore, and sells for $100,000, at a profit of $17,000 to the steel company (C). It is shipped via the steamship line (B) at a freight cost of $3,000 (profit $900). The steel company expends $37,000 in manufacturing this ore into steel valued at $150,000. It sells $50,000 worth to outsiders and $75,000 to the affiliated company "E." This $75,000 worth of steel is shipped to the "E" company over the railroad "D" at a freight cost of $3,000 (profit $600). The "E" company manufactures this steel into steel rails at a manufacturing cost of $12,000 and derives a profit of $10,000. Of this $100,000 worth of steel rails, they sell $25,000 to outsiders and $50,000 to the affiliated railroad companies. The railroad has consumed one-half of these steel rails by the time the consolidated statement is to be prepared. We would set up our schedule of the transactions somewhat as follows:

"C" COMPANY	*Gross Cash*	*Inter-Co. Profit*
Purchases	$100,000	$17,000
Freight	3,000	900
Manufacturing Cost	37,000	
Manufacturing Profit	10,000	10,000
Total	$150,000	$27,900
Sold to Outsiders	$ 50,000	$ 9,300
Sold to Affiliated Companies	75,000	13,950
Total	$125,000	$23,250
Inventory at Selling Price	$ 25,000	$ 4,650
"E" COMPANY		
Purchases	$ 75,000	$13,950
Freight	3,000	600
Manufacturing Cost	12,000	10,000
Manufacturing Profit	10,000	
Total	$100,000	$24,550
Sold to Outsiders	$ 25,000	$ 6,137.50
Sold to Affiliated Companies	50,000	12,275.
Total	$ 75,000	$18,412.50
Inventory at Selling Price	$ 25,000	$ 6,137.50
"D" COMPANY		
Purchases	$ 50,000	$12,275.
Consumed	25,000	6,137.50
Inventory at Cost Price	$ 25,000	$ 6,137.50

The consolidated statement could pick up the $75,000, inventories (the total of three inter-companies' inventory profits), less $16,925 of inter-company profit. The amount of inter-company profits going with any sale, either to outsiders or to affiliated companies, depends upon the ratio of the amount of that sale to the total sale.

It will be noticed that the inventories which we have

left for each company are figured at the cost to each company, plus their own percentage of profit. This was done simply for the sake of clearness in the illustration. Of course, these inventories would not be carried in their own balance sheets at a figure which included their own profit. For the purposes of the consolidated statement, however, the reader will see that the profit is entirely eliminated.

It is more frequently the custom to record the inter-company profits on the stock records at the time of purchase. The inventory will then show the inter-company profits without the need of such an elaborate schedule as given above.

19. *Inter-company profits on construction.*—A slightly different situation results in connection with profits on inter-company construction. They must be charged back thru the books of the holding company when they are paid out by the profiting corporation as dividends. If the construction was done for the holding company, this company will simply credit the dividends to the construction account. If, however, the construction was done for some other affiliated company, the transfer must be made thru the books of the holding company. The holding company will credit the inter-company profits received as dividends, to the company for which the construction was done. This company will, in turn, credit the same amount to the asset, construction account.

The advances between subsidiaries, or the notes given between subsidiaries, usually bear interest; or

the note of a subsidiary may be discounted by the holding company resulting in the creation of a deferred asset, "discount paid in advance," on the books of the subsidiary company. It is evident, of course, that interest paid or earned on such inter-company transactions is another item to be eliminated from the income statement.

REVIEW

Distinguish between a parent company and a holding company. Does this distinction have any significance for accounting methods?

If Company A owns 100 per cent of the stock of Company B, does it own the assets of the latter?

Describe the usual balance sheet of a holding company and compare it with a consolidated balance sheet.

What is the value of consolidated balance sheets and income statements? Describe some of the irregularities which such consolidated statements may disclose.

CHAPTER VII

VALUATION AND INTERPRETATION OF FIXED ASSETS

1. *Fixed or capital assets.*—The assets designated as fixed or capital assets are those of a permanent nature which a business organization has acquired, and which are generally financed thru the issue of capital stock or bonds. In some instances, assets of this character are financed thru surplus, but in any event they represent that portion of the capital investment which the company does not intend to dispose of, or which could not be disposed of without seriously crippling the operation of the business. Assets, the utility of which lasts less than one year from the date when they are placed in service, ordinarily should not be included under this group.

2. *Real estate, or real property.*—Published balance sheets frequently show "real estate," or "real property," which includes land, land improvements, leaseholds and buildings. Real property is the right to use and enjoy land. Under the law of real property, buildings or permanent structures erected on the land become a part of it. While this is the legal view, from the accounting viewpoint a sharp distinction is drawn between land and buildings. The reason for

this is that the accountant is forced to consider the question of depreciation in connection with buildings, and it is advisable to keep separate accounts for the component parts of the real property investment.

3. *Plant land distinguished from land held as an investment.*—The account for plant land should be charged with the value of the land acquired strictly for the purpose of manufacturing or trading operations. Business firms will occasionally make investments in land for other purposes, such as for development in connection with housing schemes for employes, and the like. Land acquired for such purposes is essentially an investment and will ordinarily receive different treatment in the accounts.

4. *Valuation of plant land.*—The account with plant land should be charged at the time of purchase with the actual cost of the land, whether it is paid for in cash or in securities. It is proper to include in the cost all the necessary and incidental expenses in connection with the acquisition of the property, such as the cost of title-searching or the registration of title, broker's commission or fee, the cost of recording the deeds and conveyancing, taxes accrued up to the date of the transfer of title, and other liens or assessments levied against the property at the date of its acquisition.

5. *Land improvements.*—While the cost of improving land or rendering it suitable for the purposes for which it is intended to be used, is frequently merged in the land account, it is generally advisable to keep a

separate account for the cost of these improvements. It may be necessary to drain the land and to fill in swamps; it may be necessary to cut down embankments. In fact, any improvements of a permanent nature which add to the value of the land, and render it suitable for the purposes for which it is to be employed are properly chargeable to this account.

6. *Land investment.*—The general principles outlined in the preceding paragraph apply to land purchased primarily for investment. The cost of any improvements made to land investments should also be carried in a separate account. It must be remembered, however, that land of this character will not produce any revenue under ordinary conditions. There will be annual carrying charges for taxes and for interest on borrowed money, and for statistical purposes it is probably desirable to add expenditures of this kind to the value of the land. Accordingly, the problem is to measure the cost of this unproductive investment. However, where the method of capitalizing the ordinary maintenance expenses is followed, a reserve equivalent to the amount of the annual capitalized charges should be set aside out of profits. The reason for this is that if the land is ultimately disposed of, such capitalized charges may not be recovered. Accordingly, the failure to provide for a reserve would inflate the surplus and, in the case of a corporation, these capitalized expenditures would be made available for dividends.

7. *The treatment of land as stock in trade.*—The

treatment of land purchased by a real estate concern for development and subsequent sale will be different from that outlined above. No difficulty will be encountered in transactions of this kind if we realize the fact that the land is similar to raw material purchased by a manufacturing concern for the manufacture of finished products. The cost of grading, street-openings, sidewalks, and sewer and water connections, all enhance the value of the property and should be capitalized. Taxes, interest on purchase-money, mortgages, and all carrying charges during the period of development may also be capitalized.

It is customary in real estate developments to keep costs by plots. Each plot is then cut up into a certain number of lots, and the total expense of the development divided by the number of lots will be the cost per lot. When a sale is made, the proceeds of the sale are in part a realization of the capital investment and in part a realization of profit. In order to determine that portion which represents a return of capital and that portion which may properly be taken to the credit of the profit and loss account, it is necessary to keep accurate costs by plots or lots.

While capital charges ordinarily cease after the property is fully developed, in order to determine the real profitableness of the undertaking it is customary to capitalize interest charges, running expenses and taxes even after the development has been completed. This is for the purpose of estimating not only the total cost to develop, but also the cost of carrying each in-

dividual lot. However, if this method is followed, carrying charges capitalized after operations have begun should be offset by the creation of a suitable reserve against the possibility of the failure to realize such carrying charges when the lots are ultimately sold. Upon the subsequent sale of lots, the reserve created with respect to this particular lot, or the portion of the general reserve created with respect to this particular lot, will be adjusted, and such portion of it as has been realized in the sales price of the lot will be released to surplus.

8. *The valuation of leaseholds and leasehold rights.* —With reference to leaseholds, it is important to note the length of the life of the lease. The benefit of all expenditures made either for land improvements or for buildings upon leased land, will pass ordinarily to the landlord at the expiration of the lease. Consequently, any value paid for the lease, or any expenditure incurred upon leased property, must be written off during the life of the lease. When a party takes land under lease and makes extraordinary improvements, the lease frequently is drawn with a provision in which the landlord agrees to pay a fixed sum, at the expiration of the term, to the tenant for the tenant's improvements. This factor must be taken into consideration in valuing a leasehold.

In other cases, a firm may have sublet its leasehold rights, and the question of the valuation of the leasehold may arise. Ordinarily such contracts are not capitalized, and the question of their value would

probably not arise except in the case of a partnership, when it might be necessary to determine the value of a deceased partner's interest. The annual income to be enjoyed from the lease, less all carrying charges, may be considered as an annuity for the number of years that the lease has to run, and from the compound interest tables the present worth of the annuity can be worked out. Any sum recoverable from the landlord at the expiration of the term of the lease may be valued by finding its present worth from the compound interest tables at an assumed rate of interest.

9. *Mineral land and timber property.*—The principles of valuation are difficult to apply in cases of wasting assets. Every dollar's worth of ore taken from a mine, or every gallon of oil from an oil well, reduces the value of the land for the purposes for which it was acquired. The proceeds of sales are represented in part by a return of the capital investment and in part by a realized profit. Because of the difficulty of arriving at these amounts, mining companies, as a rule, do not make any provision for the conservation of the capital investment, but they customarily pay out all the net proceeds of current operation as dividends.

Where the purchase of land, containing mineral wealth has been financed thru an issue of bonds, there will usually be a provision in the indenture creating a sinking fund for the ultimate redemption of the debt.

It is not generally considered desirable in mining companies to provide a reserve for exhaustion, for the

reason that the creation of the reserve results in withholding large sums of cash in the company's treasury. This fund may not be safely invested in additional mineral wealth; it will draw a small rate of interest and it may be used for speculation by the board of directors or otherwise mismanaged.

Moreover, the approximate recovery from a gold or copper mine is a difficult thing to determine; in fact, it probably cannot ordinarily be determined with any reasonable degree of accuracy. On the other hand, a competent geologist may be able to determine the approximate recovery of a coal mine. The production life of an oil well is purely speculative. Stockholders and investors in enterprises of this character must realize that every dollar's worth of dividends is in part a return of capital investment, unless the organization is providing a reserve for exhaustion. Furthermore, the investment of a reserve for exhaustion in additional land may not be desirable for, in many instances, the carrying cost of such investments will prove excessive and the investors in the undertaking will find themselves land-poor.

The valuation of timber properties is also a very difficult matter. It is true, that expenditures upon growing timber will usually be recovered and reflected in the increased size and value of the timber. However, if scientific reforestation is not employed, the proceeds of sales are a return, in part, of capital invested and, in part, of net profit.

Assets of this character are also subject to fire

hazards, in the case of timber property, and floods in the case of mines. These agencies may destroy a large part of the capital invested or cause great loss to stockholders. If contingencies of this character have not been provided for thru the medium of adequate reserves, the investor or stockholder must take this into consideration in the valuation of his interests.

10. *Depreciation or appreciation of land.*—Fluctuations in the value of land, due to economic conditions, should be ignored. This has already been pointed out in the volume on "Accounting Practice." Heretofore, consideration of possible depreciation of plant land was not necessary. The shifting of industry, however, may cause it to be an important factor against which a reserve for loss in the value of land may be appropriate. We are all familiar with loss in the value of land used for manufacturing purposes, which is caused by a relocation or shifting of the industry. Along the line of almost any railroad one may see large factories idle, because of either labor conditions or a shifting of the market for finished material, or the opening up of new sources of raw materials, which made it more advantageous for the firm to abandon its present quarters and locate elsewhere. This contingency should be considered in valuing land used for plant purposes.

11. *Important points in the valuation of buildings and structures.*—When a firm acquires buildings, which have already been erected, their valuation will

be fixed by the board of directors at the date of acquisition and will be based upon the amount paid for them. When a corporation erects its own buildings, it may undertake to do the work itself, furnishing the material, labor and supervision, or it may award the contract to a construction company. In the latter instance, the contract price will fix the value of the structure. When the organization undertakes to do its own construction, the cost of the structures will include the cost of all materials used, the cost of the labor necessary to erect the structure, and the cost of foundations and sub-structures, including water mains and similar items. It would be proper also to charge to cost of construction fees paid for the drawing of plans and specifications or supervision fees paid to an architect. Any proportion of the time spent by the administrative staff of the organization in supervising the work of construction may also be so charged. It is also proper to capitalize subsistence charges and transportation expenses of laborers or supervisors who may be employed. In fact, all the incidental and relevant expenses incurred in constructing the buildings should be charged in this way.

Any interest paid on borrowed money used in financing the construction of the building, may be properly charged to its cost until the building is complete and ready to operate.

It should be noted that there are differences of opinion about the treatment of discounts on securities issued or debts incurred in financing construction.

The best American practice, at present, does not favor charging this item.

On the other hand, in England, under certain conditions, a corporation that issued stock to finance the construction of a building might be allowed to pay a reasonable dividend on the capital stock during the time the money was being employed in constructing the building and getting it ready for operation. The amount of the dividend so declared would be charged to construction account.

Some authorities hold that interest on borrowed money used in construction should not be charged to the cost of structure. The reason advanced is that the method of financing the construction of a building has nothing to do with its cost. However, the weight of authority at the present time seems to be opposed to this theory.

Any insurance, either fire, employer's liability or general liability, paid during the period of construction is a proper charge to the construction account.

It is sometimes necessary to demolish a structure for the purpose of erecting a new one. There are two theories about the treatment of the loss occasioned by the demolition of the existing structure. One is that the loss is a necessary and incidental expense in the erection of the new structure, and therefore should be capitalized in the cost of the construction. The other theory has supporting it the economic doctrine of the place value of land. It would, of course, be an unwise proceeding for a concern to purchase land and

pay for an existing structure only to demolish it to make way for a new establishment. In fact, a business undertaking would not be likely to do this unless it were distinctly profitable for it to have its plant located, or the new structure erected, upon this particular parcel of land.

12. *Repairs, renewals, additions, betterments and replacements.*—Any considerations of the subject of the valuation of building necessarily must deal with these items. They have been so fully discussed in the volume on "Accounting Practice," however, that it is necessary here only to call attention to the fact that the valuation of assets in the balance sheet must always be considered with the qualifications that the business has made the proper differentiation between capital and revenue expenditure.

13. *Importance of segregating the investment in equipment.*—The equipment account will include the expenditure for building equipment and power-plant equipment, such as boilers, dynamos, engines, heating plant, ventilating system, and water connection.

It is not our purpose here to discuss at length an ideal classification of equipment, even if such a classification could be prepared. It will be sufficient to observe the general principles upon which equipment may be classified. One of these is according to the life of the equipment, that is, classifying all units with the same relative period of utility in special accounts, so as to enable the provision for depreciation to be as-

certained more readily. It may also be classified according to kind. In this division under the account, "boilers and accessories," would be included all of the boilers and boiler apparatus and accessories that were being used in the production of steam. These would include the valves, main steam line, grates and flues, smokestacks and chimneys, and foundations and settings, together with mechanical stokers and ash removers, etc., etc. The entire investment in this class of equipment might appropriately be carried in one account. Still a third method of classifying equipment might be according to the manufacturing units. All property investments would be classified in the general ledger by operating units or plants, and a subsidiary record for each unit, setting forth classes or kinds of equipment, would be provided. Whichever method is used, it must be remembered that certain kinds of equipment which are installed in leased property may become part of the realty and may not be removed. Consideration must be given to this factor when any of the property of an undertaking is occupied under lease.

14. *Machinery and fixed tools.*—Ordinarily the general ledger would show a machinery and fixed tools account, and if the investment is at all large, a subsidiary record should be provided for equipment of this class. The reader will recall that in the volume on "Accounting Practice" certain principles concerning the valuation of machinery and equipment were discussed, especially the treatment to be given to

equipment manufactured by the organization itself. Tools and equipment having a period of utility of less than one year, should not be charged to this account. Because of the necessity of replacing them immediately, it is better to charge such tools and equipment direct to the income account. If this practice is followed, the original outlay for short-life equipment can be capitalized and it would then represent the total sum necessary properly to equip the organization with these short-life assets. This procedure would avoid the unsatisfactory and time-consuming method of providing annually for depreciation on equipment of this type.

15. *The valuation of furniture and fixtures.*—This asset may be subdivided between the furniture and fixtures in the manufacturing plant and that in the general office or in branch offices. It consists of all furniture, machines and devices for calculating or for clerical use, lighting fixtures, partitions, and the like. In dealing with this asset, it is not uncommon for firms to capitalize the expense of a complete and adequate outfit, and charge any annual expenditures incurred subsequently in renewals or replacements, direct to the expense account. Other organizations find more satisfactory the method of capitalizing all new purchases and writing off depreciation periodically. Most conservative organizations follow the practice of depreciating these assets rapidly because, if abandoned, they are worth very little for scrap. A banking organization will write down its building and fix-

tures much more rapidly than would the ordinary manufacturing organization. It is true, this creates a secret reserve, but it is considered good business policy in organizations of this type.

16. *The principles employed in the valuation of stable and garage equipment.*—Horses and mules are ordinarily revalued from year to year by appraisal. Automobile trucks are usually depreciated at the rate of from 20 to 33⅓ per cent. The balance of the stable equipment will ordinarily be depreciated at rates from 12½ to 20 per cent.

17. *Patterns, drawings, and dies.*—It will not be necessary here to amplify the discussion dealing with the class of assets represented by patterns, drawings, dies and the like, which the reader has already found in the volume on "Cost Finding." Care and discretion and a great deal of common sense must be used in the valuation of these assets. The failure to provide adequately for depreciation is a very common occurrence, and if an asset of this kind appears in a published balance sheet for a large amount, the stockholder or investigator is justified in regarding it with considerable suspicion.

18. *The general problem of depreciation.*—Attention has already been called, in the Texts on "Accounting Principles" and on "Accounting Practice," as well as in that on "Cost Finding," to the general subject of depreciation, its importance, the methods of providing for it, and the necessity of giving it due recognition in the accounts. Our interest at present

lies in the general subject from the point of view of the interpretation of a balance sheet.

If depreciation reserves appear on a balance sheet merged with other reserves or with surplus, as is very often the case, a just suspicion may arise that this method of combining the reserves and the surplus has been adopted because of the fact that the depreciation provisions are not adequate. If the reader of a published balance sheet has the current income account at hand, perhaps he may satisfy himself as to the adequacy of the depreciation provision for the current period. But this will not be an indication which may always be relied upon. Some firms often follow the practice of providing heavily for depreciation in prosperous years and ignoring the provision during lean years.

19. *Special factors to be considered in interpreting a balance sheet.*—The assets which we have described above comprise the tangible fixed capital of ordinary undertakings. It is not usual to find the elements of the capital assets classified in sufficient detail in a published balance sheet. For example, the land and buildings may be merged in one account, or land, buildings and equipment may be merged in one account. Inasmuch as the reader of the balance sheet probably would not be in a position to know the value of the land or the building or the equipment, he would be at a loss to decide whether or not the amount of capital invested in this class of assets was excessive or inadequate. Neither would it be possible for him

to determine satisfactorily the adequacy of the reserves provided for depreciation.

In other cases, the intangible fixed capital of goodwill, patent rights, copyrights, trade-marks or franchises may be merged with the tangible fixed capital. In cases where this occurs it is a fair assumption that the intangible fixed capital constitutes a large proportion of the total value of the assets. It is to be noted, however, that many of the larger corporations now follow the practice of stating separately, in their balance sheets, the valuation of the tangible and the intangible fixed assets. Occasionally in public balance sheets we find the tangible fixed capital grouped under an account, "cost of property." However, this is no indication of its true value.

The relation between total fixed assets and the aggregate amount of capital and long-term debt is important. In considering this relation, the reserve for depreciation may be ignored, for theoretically the cash which represents this reserve is available for the repair of any waste or decline in the value of the fixed tangible assets or it has been reinvested in property. Many organizations make the mistake of investing too much of their capital in costly plant, and do not leave enough working capital with which to conduct their operations profitably. It may then be necessary for them to raise large amounts of floating debt with which to finance the purchase of working and trading assets, pending the conversion of their current assets into cash. As pointed out in the Text on "Corpora-

tion Finance," these floating liabilities may be a source of weakness or the cause of insolvency in times of panic or depression.

If the corporation has an issue of bonds, it is important to note just what particular property of the organization is pledged as security for the debt. In all probability, the land, land improvements, buildings and structures are specifically pledged. But in this connection it must be remembered that much of the plant and machinery and building equipment, under the law, is technically realty or realty fixtures, and accordingly may be pledged under the mortgage.

20. *Equipment purchased on the partial-payment plan.*—Transportation companies and other undertakings often acquire equipment on the partial-payment plan. It is evident that equipment purchased under this method of financing will cost more than if it were paid for in cash. The difference between the price paid under the partial-payment plan and the cash price of the same equipment is the amount of interest which the seller has charged as an offset to the postponement of the payment date. Usually it will not be a difficult matter to determine what the cash price is. Then, the number of payments being known and a reasonable rate of interest assumed, it will be possible, thru the medium of instalment loan tables, to determine how much of each periodical payment is to be applied to the reduction of the debt, and how much represents interest.

The greater portion of the initial payment will be

on account of interest, but the gradually decreasing principal will decrease the interest charge correspondingly, with the result that the later payments will reduce the principal more rapidly. The agreement under which equipment is sold in this way usually provides that the title shall remain in the seller until after a specified number of rental payments have been made. Then, upon the payment of $1.00 additional at the end of the rental period, the seller agrees to transfer title to the purchaser.

During the rental period, the purchaser will have to bear all the maintenance charges necessary to keep the equipment in its original condition. It also follows that depreciation enters into the problem, and that the buyer will have to set aside out of his earnings an adequate provision for the accrued depreciation on the equipment which will come ultimately into his possession. The proper method of treating the periodical instalment is to set up in the balance sheet as an asset the amount paid each period on account of principal. This would be designated by a title such as, "Equity in equipment purchased under partial-payment plan," or by some other suitable and descriptive title. The balance of the periodical instalment should be charged to the income account.

Inasmuch as the title remains in the seller until the final payment is made, objection may be raised to this method of treatment. The ground for the objection would be that the equity is not an actual asset and would be forfeited if the purchaser failed to com-

plete the remaining payments. While this is true, yet if there does not appear to be any doubt of the firm's ability to meet the remainder of the payments when due, it seems to be better to set up the equity in the balance sheet.

Another method of handling the matter would be to express the full contractual agreement in the accounts. This would be done by setting up an asset account showing the cost price of the equipment in the equipment account, suitably ear-marked by a contra-reference to the total contractual liability due to the sellers. The amount of interest included in the purchase price could be set up as a deferred charge to income, and it also should be suitably ear-marked by a contra-reference to the contractual liability set up and representing the amount due to the seller. As each periodical payment is made in cash the contractual liability created would be reduced and cash credited.

Furthermore, at each periodical payment a rateable proportion of the deferred charge, or the deferred asset, for interest would be transferred to the current-income account; thereby the amount of the deferred asset is reduced. The amount standing at the debit of the equipment account, plus the amount of the deferred charge to income remaining on the books, would represent the firm's equity in the equipment, when offset by the balance remaining in the contractual liability account.

REVIEW

State whether the principles applicable to the valuation of land differ according to its uses, as plant land, as investment or as stock in trade of a real estate development.

How do mining and timber companies usually treat land in their accounts?

In what important respect does the valuation of buildings differ from that of plant land?

Give reasons why the accounts should always segregate equipment from lands and buildings.

What is the best method by which to treat, in the accounts, equipment purchased on the instalment plan?

State some of the conclusions which may be drawn from the manner in which accounts may be grouped in the statement of assets.

CHAPTER VIII

VALUATION AND INTERPRETATION OF INTANGIBLE ASSETS

1. *Introduction.*—It is common practice to include under capital, or fixed assets, such items as good-will, patents, franchises and the like. Inasmuch as all assets of this nature are of an intangible character, as distinguished from real estate, buildings, plants, etc., the author thinks it more advisable to group them under a separate heading.

2. *Good-will defined.*—While good-will frequently appears as an asset in the balance sheet of a business concern, there are very few who have a definite conception of its true nature, or of the proper method of valuing it. Good-will has been defined as that intangible quality of patronage which attaches to an established business and is presumed to attach to it, irrespective of any change of ownership.

A better definition, perhaps, would be that good-will represents the present worth or capitalized value of the estimated future earnings of an established enterprise in excess of the normal results that it might reasonably be assumed would be realized by a similar undertaking established anew.

Guthrie, in discussing good-will, says:

The measure of value, in pecuniary terms, of this intangible thing is the difference between the value of the normal results of the working of any business or profession which may be established by, and as worked by, any person in any place, and the result of working any individual business of a similar character. Thus, given a business, the good-will of which is for disposal, there would be no valuable good-will if any one could do just as well by establishing a business anew. To start a business has its risks, which may often be described as very serious risks, but apart from the mere perilous risks of failing to take proper root, there is the often weary time—sometimes a long term of years—during which a sufficient connection is being got together to bring the business up to a standard paying basis which will give a good-will value, or bring a good-will value into sight. To be spared this period of what I may call perilous probation is something worth paying for, even tho its maintenance from this point needs the continuous energy and industry by which it was built up by the original proprietor. Time, money and anxiety saved is money made. This is what is worth paying for and in this degree a good-will value attaches to an established business.

3. *Value of good-will dependent on location.*—The value of good-will is dependent on a number of factors. One of them is the location of the business premises. A change in the movement of traffic, due to the opening of a subway or the relocation of a terminal, may result in loss of patronage. This frequently happens in the more populated centers. On the other hand, it is not unusual to find examples of businesses so well established as not to be injured materially by the diversion of traffic or the inconvenience of reaching the business premises.

4. *Good-will dependent upon the reputation and*

integrity of the firm.—Good-will may also depend upon the reputation of the firm for fair dealings and integrity. Thus, strict fulfilment of contracts, dependable quality of the merchandise sold, employment of efficient salespeople, prompt deliveries, favorable terms of credit, are attractive features which result in increased patronage, frequently in spite of an unfavorable location, or the more extensive advertising of competitors. As long as the original business policies are continued, good-will of this type usually will not be affected by a change of ownership. In this case good-will consists of the advantage which the new proprietor derives from being allowed to represent himself as the successor of the former owner or owners.

5. *Good-will created by established monopolies.*—Good-will is often created by the monopoly enjoyed thru the possession of a patent right or franchise, or as the result of the demand created and the patronage procured thru the extensive advertising of a trademark. While the life of a patent is limited by law, in many instances its holder or holders may have secured a foothold from which it may be almost impossible for competitors to dislodge them, even tho the patent has expired.

In this connection it is well to bear in mind that good-will has often been used as a subterfuge to reduce the rate of return on capital investment. That is particularly true in the case of public service corporations.

In the litigation between the City of New York and the Consolidated Gas Company of that city, the Supreme Court of the United States rendered a decision to the effect that in determining whether or not a legislative rate was reasonable, good-will could not be included as an asset.

This decision points out that there can be no recognition of good-will in the case of a public service monopoly. In view of the popularity of holding companies the decision is well worth remembering on account of the effect which the further interpretation and enlargement of this doctrine may have.

6. *The earning power as a factor in the valuation of good-will.*—The fact that a business possesses a favorable location and has a well-established patronage does not necessarily imply that a purchaser should be willing to pay for its good-will. If these advantages do not return in net income a rate higher than a fair rate of interest on the capital investment and the wages of management, the purchaser would be unwise to pay for good-will.

The new owner will naturally expect to receive a greater return of income than his interest and management expense, or at least he will desire to see in the business the possibilities of receiving greater profits than his predecessor obtained.

It is quite true that the good-will of a defunct enterprise has frequently realized a fairly large sum on the sale of the business, but in these instances it will be found that the new purchaser bought with the

hope of being able to overcome obvious faults of mismanagement, and that he depended upon building up a successful and profitable enterprise by himself.

In the amalgamation and consolidation of competing companies good-will is frequently represented by the anticipated savings which it is hoped will result from the elimination of competition and the introduction of economies in management.

Where these anticipated savings have not been realized—and that is true in many cases—usually it will be found that the good-will which was created was represented by an issue of common stock that received no dividends. In that case it is spoken of as fictitious good-will.

7. *Transferability.*—Mention has been made of the factor of transferability. A professional firm sustains a confidential relation with respect to its clients, and it is very difficult to separate the good-will of such a firm from the personality of the professional man. It may be said, therefore, that the good-will in this instance, as a transferable asset of value is almost nonexistent. It is for this reason that courts in many jurisdictions refuse to recognize good-will that rests entirely upon individualities, and a purchaser would be unwise to pay a high price for it.

8. *Method of valuing.*—The most common method of valuing good-will is the so-called year's purchase method. The good-will is valued upon the basis of a certain number of years' purchase of the annual profits of a selected number of preceding years, or a

certain number of years' purchase of the excess income of that enterprise, which consists of the residue of profits that remains after deducting interest on the capital, wages of management, and the like, from the net profits of operation. When this method is used it is important to see that the years selected have been normal ones and that the results in future years are likely to approximate or to exceed past experience.

The number of years to be considered is a matter of bargain between the buyer and the seller, and accordingly no general rule can be laid down to apply to all lines of business. The usual estimate for an ordinary trading business is two years' purchase of the profits. Where a manufacturing business is under consideration the period is usually longer, say from four to five years, whereas for a monopoly or a quasi-monopoly the period selected is usually from eight to ten years, and for professional practice the period usually selected is one year.

The purchase of the profits for a number of years is in reality the purchase of an annuity of the amount of the profits for the number of years selected. If this view is taken, the good-will will be valued by the so-called annuity method. Under this theory the good-will is assumed to have a certain definite life, and when the amount of the excess profits and the number of years during which they are to be enjoyed have been determined, the problem consists of determining the present value of the annuity for the period selected

at a given rate per cent. This can be ascertained readily from compound interest tables.

9. *Factors to be eliminated for the purpose of valuation.*—During the period covering the years' purchase, if unusual transactions or speculative ventures were entered into which resulted in extraordinary profits, the amount of these profits should be eliminated. Such profits are not incidental to the business which it is proposed to acquire, and therefore they should be ignored. The same rule applies to any other unusual or exceptional items of profit. Take as an illustration the conditions resulting from the European war.

It often happens that the owner of a business anticipates selling it and has been using exceptional economy in expenditures for repairs during the last year or two, which would naturally reduce the amount charged against profits. Such a practice not only is an ultimate detriment to the assets of the business, but it also results in an overstating of the profits with a consequent overvaluation of good-will.

The amount of money paid for interest on borrowed capital should be eliminated from the expenses, for the reason that interest on borrowed money is a penalty which the business has had to pay for not having sufficient capital. The same thing applies when a firm has not taken advantage of discounts, by reason of lack of capital with which to prepay its bills.

10. *Factors requiring careful scrutiny.*—It is necessary to see that adequate depreciation has been

provided for, not only on the fixed assets but also on some of the current and deferred assets. The reader will see readily that if proper provision for depreciation has not been made, the profits will be overstated and the good-will correspondingly overvalued.

In determining the value of the good-will it is important to see that all existing liabilities on contracts which the former owner may have entered into are given due consideration. Contracts may have been entered into prior to the date of the sale of the business, the completion of which may result in a loss and therefore affect the profits to be enjoyed by the vendee.

Oftentimes it is found that sales on consignment or sales on approval have been represented in the accounts as valid sales and the full credit for profits has been taken into the income account.

In other cases when municipal assessments are allowed by law to run for a number of years, the books will not reflect these obligations in any way. It will be noted that the annual payment or assessments of this character will seriously affect the profits, and if any unpaid assessments remain, due weight should be given to them in considering profits.

In some instances only a portion of the business is disposed of by the vendor. It may be that he is to retain that part of the business which is earning all the profits, and that he is selling that portion which is not profitable. If the accounts of both branches have been merged and if it is impossible to extract informa-

tion from the records as to the profitableness of the individual units of the business, the determination of the value of the good-will becomes a very difficult problem.

11. *Mathematical results.*—The first step, therefore, is to determine what the annual profits are for a number of years. The next step is to average them so as to get the average profit for one year. It is customary to deduct at this point interest on the capital invested from the amount so found. The interest rate is generally an assumed per cent per annum, often six or seven per cent. This is based on the theory that a tangible asset in the business will earn at least that rate of interest. In other words, out of the total profits realized, this particular amount is reserved for the normal interest which the invested capital would earn elsewhere. The result will be the excess income, which constitutes an annuity to be enjoyed for a period of years.

12. *Fictitious good-will.*—The good-will account is sometimes used as a medium for concealing losses, the account being raised to an amount equivalent to or greater than the deficit in the income account. It may also represent an overissue of capital stock. In fact, good-will appearing in the balance sheet of many of the largest consolidations represents stocks and even bonds issued not only for all the good-will that the consolidated concerns actually possessed, but in addition all fees for banking and promotion services. In a few instances this account represents an exag-

gerated forecast of the savings and economies anticipated thru the consolidation of competing concerns which unfortunately have never materialized.

13. *When good-will is created.*—From an accountant's point of view, good-will should appear on financial statements after it has been acquired, and for the original cost only.

It is held by some that when a concern has just commenced business and has incurred a large expense for advertising during the probation period, it should be charged to a good-will account. This is based on the theory that it is unfair to charge all the expense of large advertising appropriations and the cost of creating a demand for the products of the firm, against the profits of the year in which the expenses were incurred. If the expenditures mentioned above resulted in placing the business upon a firm foundation, and if there is a reasonable assurance that profits will result from the expense incurred in promoting the business, it is permissible to charge this extraordinary advertising expense, during the first two or three years, to a good-will account. This practice is based on the theory that the amount has been expended for the benefit of subsequent years, which are to receive the advantage of the present extraordinary expense.

However, for safety's sake, it may perhaps, be much more advisable that such expenditures be carried under "Prepaid Advertising" and be written off in future years.

Good-will should not be created arbitrarily upon

the accounts of a business except in cases similar to those mentioned above.

Neither in the case of a sole trader or partnership nor in the case of a corporation has this practice anything to commend it. An intending purchaser would value the good-will independently, regardless of its value in the balance sheet of the vendor. Bankers or credit men would ignore the items and rather view them with suspicion.

14. *Is good-will of a fluctuating value?*—While good-will is an asset of the most fixed nature, in the sense that it could not be disposed of without seriously interfering with the success of the business, it is necessarily a fluctuating asset because its value is measured by the earning power of the business, which ordinarily fluctuates. It must follow that the value of the asset will correspondingly fluctuate.

There is considerable discussion as to whether or not this is true. In a paper read before the Congress of Accountants—in St. Louis, in 1904—entitled "The Profits of a Corporation," Mr. A. L. Dickinson, C. P. A., states:

> . . . As long as the earnings of a business are maintained at not less than the level contemplated at date of purchase, it is impossible to allege any depreciation of value or the necessity of any provision therefor. On the other hand, if any serious depreciation has taken place, the profits are probably so much reduced that it is not possible to make such provision. Good-will is, in fact, a fixed asset whose value is to some extent dependent upon the profits, and its fluctuation being consequent on, and not a cause of, the earn-

ings or profits, as are wasting or partially wasting assets, should not, therefore, to be taken into account in ascertaining them.

On the other hand, in an article that appeared in "The Accountant" (London, December 6th, 1913), Mr. John Bauer makes a plea for an annual adjustment of the good-will, based upon the profits, and advocates the adoption of the plan because of certain advantages which he claims will result from it. He distinguishes fundamentally between asset value (cost) and capital value. He uses this latter term to represent the sum of the discounted future profits of the business, assuming equal annual profits. Under this plan the good-will account would be adjusted annually thru the surplus account or thru the proprietorship account, based upon the showings of the business. If the business looked highly prosperous and the prosperity seemed likely to increase, or at least remain static, the good-will would be increased and the surplus, or proprietorship, correspondingly increased. If, on the other hand, the reverse were true, both the surplus and the good-will account would be decreased.

To further support his theory he cites the case of a concern with tangible or physical assets worth $50,000, which is taken over by another company, the latter paying $5,000 for the good-will. On the books of the new company the assets will appear at a valuation of $55,000, because the second company paid $50,000 for tangible assets and an additional $5,000

for the good-will. Yet a concern in all respects similar to the first mentioned, but operating independently, would present a balance sheet with the assets totaling only $50,000. If good-will is recognized in the first case, why should it not be recognized in the second? Mr. Bauer's plan is novel and interesting. It is doubtful, however, whether it will be widely accepted. As a matter of fact, the principle involved in Mr. Bauer's discussion is, whether or not assets should be valued at cost or upon the basis of present-day values irrespective of cost. We are of the opinion that a rigid cost theory of value is the best, for the reason that any other theory may lead easily to inaccuracy and manipulation, and therefore may work serious hardship to investors.

15. *Adjustment of good-will account in consolidations.*—When a company takes over the assets of other companies, numerous adjustments on their books are necessary, and some of these affect the good-will account. For illustration, let us assume that Company "C" has agreed to purchase the assets of Corporation "A" and also the assets of Corporation "B." Let us assume, further, that the assets of Corporation "A" were purchased for an amount of stock in excess of the value of the physical assets—in other words, that something was paid by "C" for the good-will of "A." Suppose further that the assets of "B" were acquired for an amount of stock less than the book value of the physical assets. In the latter case the presumption may be that the assets of Company

"B" were not worth the book value. On the other hand, if Company "B" were not operating at a profit, the new or consolidated company might be able to purchase its assets for less than their physical value. If Corporation "C" takes over the assets of Company "B" at their book value a surplus will result, because less than the book value was paid for the assets; and if the assets of Company "B" were fairly worth the value shown by the books, the surplus would be a valid one and a question arises as to the disposition to be made of it.

From a legal standpoint there can be no objection to such a surplus being made available for dividends. Conservative practice, however, would favor the use of the surplus for the purpose of reducing the good-will account on "C's" books. Now, in the books of Corporation "C" the good-will will appear at a value equivalent to the amount paid for "A's" good-will, reduced by the surplus resulting from the acquisition of "B's" assets. On the same principle, any increase in the revaluation of the tangible assets at the time of the purchase may well be applied to the reduction of the good-will account on the books of the consolidated company.

16. *Good-will in consolidated balance sheet.*—The good-will account in a consolidated balance sheet will represent not only the aggregate of the good-will accounts in the balance sheets of the subsidiary companies, but in addition it will represent the amount by which the aggregate value of the stock of the sub-

sidiaries on the books of the holding companies exceeds the par value of their stock and surplus, on the date of the acquisition of the stock of the subsidiaries. For example, if the stock of one of the subsidiary companies appears on the books of the holding company at a value of $120 per share, and if the book value of the stock on the date of acquisition were $110 per share, the difference of $10 per share in the cost of the securities to the holding company, and their book value at the date the stock was acquired, would have to be adjusted thru the good-will account on the consolidated balance sheet.

17. *Patents, trade-marks and copyrights.*—In considering the valuation of good-will, it is well to bear in mind the valuation to be placed upon such assets as patents, trade-marks or copyrights, because the rights conveyed by these grants create a monopoly in favor of the owner or owners. In turn, quite commonly a good-will is created which, as a rule, will last a longer period than the legal life of the assets. This is because the owner of the grants during the years in which he enjoys a monopoly has so firmly entrenched himself that competitors will not easily succeed in dislodging him. It has already been explained that a patent is a grant which the Government makes to an inventor, conveying and securing to him the exclusive right to make and sell his invention for a limited number of years. In the United States the life of a patent is seventeen years and the grant may be renewed only by special act of Congress. While

in this country it is not necessary to use the patent right in order to retain the grant, in certain foreign countries this is not the case.

A trade-mark is a grant by the government whereby a certain design, slogan or particular label or device is reserved to the holder of the grant, as his exclusive trade-mark, and he is protected against its use by others. In the case of trade-marks, however, the owner or owners must use the design or label in order to be protected in it, and it is to be noted that the rule is different in this case from that of a patent. The grant has a life of thirty years, and is renewable for a like period.

A copyright is a right conveying the exclusive privilege of printing, publishing or vending copies of certain artistic or literary productions. A copyright has a life of twenty-eight years from the date on which it is recorded and it is renewable for a similar period under certain conditions.

18. *Valuation of patents.*—If a patent has been purchased from the inventor, or from a former owner, the question of valuation is a simple one. The valuation of the patent is the price which the owner has paid for it, and this value must be amortized, at least during the remaining years of its legal life. As a matter of conservative practice it is best to write off the patent at less than the legal life, because of the fact that new inventions will generally render the patent valueless before the expiration of its legal life. Another method of writing off a patent right is to

predetermine, as closely as possible, the number of units to be produced under the grant and charge the unit cost of each article produced with a proportionate part of the value assigned to the patent, so that the cost of the patent will be spread over the units produced under the grant.

Many business concerns maintain engineering departments which produce valuable inventions from time to time, and if any of them are patented it is considered proper to charge the patent account with the cost of conducting the experiments and investigations which led to the production of the inventions. In addition to this all fees paid in connection with the registration are also chargeable to the patent account. It may be necessary for the owner of the patent to engage in lawsuits in order to protect his rights and prosecute infringements. If these suits are successful there is no serious objection to charging their cost if it is not collectible, against this patent account.

19. *Valuation of trade-marks.*—While the actual cost of securing the trade-mark is insignificant, its value may be very great. Inasmuch as the life of a trade-mark is limited to the actual number of years during which it is to be used, it is difficult to predetermine the approximate life of the asset. When a trade-mark has been purchased from others and the cost of acquiring it has been high, it must be assumed that the trade-mark carries with it a certain amount of good-will. The same general principles which have

been discussed in the preceding sections apply to trade-marks.

20. *Valuation of copyrights.*—The value of a copyright usually lasts for a shorter period than the legal life, a fact which adds to the difficulty of valuing it properly. When a copyright is obtained by a composer or an author the cost is insignificant. In such cases it is usual to write off the amount as a part of the expense of the first edition of the work.

Copyrights may be purchased from a former owner, and in such cases a high price is often paid for them. It is then usual for the amount paid to be spread over a number of years, during which it is expected the public favor will be retained. These factors are so difficult of determination that conservative practice requires that this asset be written off rapidly. It will be noticed that the life of patents, copyrights and trade-marks is terminable by law, whereas, that of good-will is not.

Patents, copyrights and trade-marks, as balance sheet items, are frequently used as devices to conceal issues of watered stock, and when the amount appears relatively large a question is raised at once as to the correctness of the valuation. In this connection, however, it must be borne in mind that the good-will is often built up around a patent, a copyright or a trade-mark. Therefore, while the legal life of the asset may have terminated, the good-will created as a result of the continuous use of the monopolistic grant may have become very valuable.

In the discussion of the intangible assets the author has assumed that the statements showing these assets have been compiled from books that have been kept honestly. It is the part of wisdom, however, for a prospective purchaser to employ a competent accountant for the purpose of vertifying the results of operation and the valuation of the assets. To safeguard himself it is best to procure a certificate as to profits and valuation of assets.

REVIEW

Define good-will, and state the factors upon which it depends and the means by which it is created.

What factors must be taken into consideration in valuing good-will? What should be disregarded?

Describe the method of reaching a reasonable valuation for good-will. What are the motives which prompt an inflation of this account?

What is the proper treatment of good-will in making consolidated balance sheets for a corporation and its subsidiaries?

Can rules be formulated for the valuation of patent rights, trade-marks and copyrights?

Why is conservatism especially needed here?

CHAPTER IX

VALUATION AND INTERPRETATION OF CURRENT ASSETS

1. *Current assets defined.*—The reader will recall that current assets mean assets available for the purpose of discharging current liabilities. Included under this heading are such items as cash on hand and in bank, notes receivable, accounts receivable, and all other debts due to the business, having a maturity date of less than one year.

2. *Cash on hand.*—The cash balance in the hands of petty cashiers, or working funds in the hands of employes, form the cash on hand. Cash items or I. O. U's. should not be included as a part of cash. These funds are usually handled under the imprest cash system, which has been described fully in the volume on "Accounting Principles."

3. *Cash in bank.*—Cash in bank may consist of amounts on deposit subject to immediate check, or it may be represented by certificates of deposit which may not be withdrawn until a certain number of days after notice.

Certificates of deposit which may not be withdrawn until a certain number of days after notice should not appear in a balance sheet, unless they are suit-

ably ear-marked to indicate the restricted character of the balances.

It occasionally happens that a firm will overdraw its bank account by sending out checks for a greater amount than it has on deposit, relying on a sufficient amount of collections to make good its balance before the checks are presented at the bank. If the cash is overdrawn at the date of the balance sheet, the fact should be disclosed by setting up a current liability for the amount of the overdraft.

Some large corporations have considerable sums of cash on hand which it may not be wise to place in temporary investments, or which may not be invested safely in merchandise purchases. Occasionally portions of the cash fund may not draw interest. It is advisable to state separately in the balance sheet, or in a sub-schedule to a balance sheet, the amount of cash balances which are not drawing interest.

When a concern sells securities with the understanding that the proceeds are to be used for special purposes, the proceeds of such sales should not be merged with cash funds which are subject to check. Thus, an organization might sell some of its preferred stock for the purpose of financing the construction of an addition to its plant. Conditions may have changed in the meantime so that it is not considered desirable to proceed with the construction work. The corporation is under a moral obligation at least to keep the proceeds of the sale of such stock separate

from its cash subject to check. It should not use the funds for other purposes.

Cash deposited with sinking-fund trustees should not be shown as a current asset, because the amounts are not available for the general purposes of the organization.

4. *Investments in stocks and bonds.*—Investments in securities may be either permanent or temporary. Permanent investments may be investments made for the purpose of controlling the activities of another organization, or they may be fund investments of reserves. Temporary investments may be illustrated by such cases as occur when a corporation has large cash resources and cannot invest them profitably in merchandise or obtain a reasonable rate of interest from depositories. In this event, the firm may purchase securities for the purpose of obtaining a larger income, but with the idea of being able to convert the securities into cash when additional cash funds are required.

5. *Classification of permanent investments.*—Permanent investments may be classified broadly as follows:

(1) Investments in the stocks and bonds of parent companies.
(2) Investments in the stocks and bonds of subsidiary companies.
(3) Investments in the stocks and bonds of allied companies.

(4) Investments in the stocks and bonds of outside companies.

A further subdivision might be made as between those which are pledged and those which are not pledged. A corporation may pledge its holdings of stocks and bonds as security for its issue of collateral trust notes or bonds. If any of the investments of a corporation have been pledged for this purpose, the balance sheet should disclose that fact.

The first and second classifications have already been treated fully in previous chapters.

6. *Investments in the stocks of allied companies.*—Investments frequently occur in the stock of allied companies. Examples of this type are: the investment which a railroad company makes in the stock of an express company operating over its lines; or investments in stocks of terminal companies and development projects. Such investments should be carried at cost. Conservative management requires that appreciation in the investment should be ignored until the time of sale, while depreciation in the value of the investment should be provided for thru the medium of an appropriate reserve.

7. *Investments in outside companies.*—Outside investments are frequently made out of surplus cash funds for the purpose of realizing a higher rate of return than could be secured from bank deposits. In the majority of cases, these are intended to be sold as soon as the business needs cash. Consequently,

they will be treated usually as current assets if they are purchased with the intention of making them available for cash requirements. When the investments are purchased for temporary purposes, it is necessarily implied that a change in the value of securities will have a more direct effect upon the balance sheet of the company than a change in the value of permanent investments. While the general rule that investments should be carried at cost is a safe one to apply even in this case, due attention should be given to a reserve for any possible loss in value thru a decline in the market price of such securities.

8. *Investments of insurance companies and investment companies.*—Fire insurance companies, life insurance companies and investment companies frequently are required by law to value their investments for balance sheet purposes in accordance with the ruling market prices on the date of the balance sheet. When an organization is compelled to adopt this plan for its statements, it is deemed advisable to place the cost of the securities to the owner in a parenthetical reference on the balance sheet, so that comparison may be made between the cost and the present market value of securities.

9. *Investments of bankers and brokers.*—Bankers and brokers holding investments in stocks and bonds are accustomed to value the securities held by them at the market price on the date of closing the books. It often happens in these cases that some securities on hand will have increased in market value, while

others will show a loss, owing to the decline in market value. It is considered proper in the case of bankers or brokers to allow the increases to offset the decreases and to take any increase in the market value of securities to the credit of profit and loss, setting aside a reserve for any loss sustained on the decline in market value at the date of the balance sheet.

10. *Treatment of outside investments in bonds different from that of investment in stocks.*—The principal differences between stocks and bonds have been pointed out in the volume on "Corporation Finance," and it remains for us now to consider the accounting features with respect to bonds. It is evident that if a bond has been purchased at a premium and is to be held until its maturity, a smaller sum than the purchase price will be realized on the maturity date. The premium paid at the time of the purchase should be written off against the income received from the bond during its life, so that each year's income will be credited only with the true yield on the investment.

For example, if the nominal rate of interest on a bond is 5 per cent, and if the bond sells at a premium, the actual yield on the bond will be a lower rate of interest.

Assuming that a corporation purchased $100,000 worth of bonds bearing interest at 5 per cent, payable semi-annually, with five years to run before maturity, and that the premium paid amounted to $1,000, the owner must amortize the premium during the five years that the bonds have to run. Altho he receives

for interest, at the semi-annual period, the sum of $2,500, his actual income on the bonds is only $2,400, and he should deduct the sum of $100 from the interest received at each period. The effective rate of interest in this case would be only 4.8 per cent, instead of 5 per cent. By reason of the premium paid, there has been a loss of 0.2 per cent in the interest.

On the other hand, it is obvious that if bonds are purchased at a discount, the yield is higher. To carry out our former illustration, if the $100,000 worth of bonds were bought at $99,000, the yield would be 5.02 per cent.

11. *Securities purchased for speculation.*—Stocks and bonds are sometimes purchased on margins, for speculation. In this case, the assets consist of the right to receive the delivery of the securities upon the payment of the balance of the purchase price. An offset to this asset is the liability due to the broker for the full purchase price, less the margin deposited. Subject to the qualifications mentioned with regard to investment companies whose practice is to value securities for balance sheet purposes at the market price, securities purchased on margins should be carried at cost, plus the brokers' fees incidental to the purchase.

The interest charged by the broker for the difference between the amount deposited as margin and the purchase price, should be charged to the security account and credited to the broker's account. There will be an offset to the credit for interest allowed by

the broker on the amount deposited as margin. Any dividends received on stocks, or interest received on bonds by the broker for the account of the investor, will be charged to the account of the broker and credited either to the investment account or to the income account, preferably the former. The difference between the asset and the liability account will measure the equity of the owner in the investment.

It is often better to credit to the asset account dividends and interest received, reducing the cost of the investment so that when the investment is eventually sold, the proprietor will be enabled to determine his net profit or loss on the speculative transaction, taking into consideration all the elements that have entered into it.

12. *Investments in the stocks of mining companies.* —It has already been pointed out that in the case of mining companies it is not customary to set aside a reserve for the depreciation of wasting assets. Dividends declared on the stocks of such companies are in part a return of the capital invested and in part a return of income. In the case of a coal-mining property, the investor might be able to secure information which would enable him to apportion approximately the amount of the dividend received on the stock as between the part of it which was a return of the capital investment and the part which constituted true income. But in gold-mining, copper-mining companies and oil companies it is not possible to do this, and hence the necessity of following a care-

ful and conservative policy with investments of this character.

Investments in the stocks of timber companies may have a somewhat different character, because such companies are often in the habit of setting aside reserves for depletion or exhaustion. Often the reserve set aside is reinvested in additional timber properties or in the reforestation of the denuded land. The policy of the particular company in these matters will determine the treatment to be given in the accounts to income received on such stocks.

Investors in the bonds of companies whose assets are of wasting character are usually protected by the accumulation of a sinking fund.

13. *General considerations with reference to valuation of securities.*—It is always well, whenever possible, to check investments of this character against the current market prices. When this cannot be done the cost prices of the investments should be obtained, if the investments are carried in the balance sheet on any other basis. Bonds must be considered with reference to security of principal and with regard to the ability of the obligor to meet the interest payments. In connection with foreign investments the possibilities of profit or loss due to fluctuations in exchange should be considered.

14. *Notes receivable.*—We must distinguish between notes which are taken in the ordinary course of trade and those which are given to an organization for its accommodation. Each class should be

stated separately on a balance sheet. Notes which have been given by officers, directors, stockholders or partners should not be included in the notes receivable from trade debtors. The reason for this will be evident if we reflect that one who reads the balance sheet will assume ordinarily that the notes and accounts receivable represent amounts not collected from trade debtors, unless otherwise stated. It is evident that notes given to a merchant for his accommodation or notes from officers, directors or stockholders are not taken in the ordinary course of business, and a balance sheet which did not disclose the true character of these transactions would be misleading. Assets of this character are probably not as liquid as notes from trade debtors, or they might not be available for the purpose of meeting current liabilities. The fact that notes are marked "demand notes" is not necessarily an indication that the debtor would be able to pay on demand.

Any notes receivable which have been assigned or pledged as collateral security for a loan should be handled in the same manner as merchandise pledged as security for advances. It may not be inadvisable to point out here that the fact that a business organization is compelled to assign its notes or accounts receivable is not necessarily an indication of a poor financial standing. The establishment of bank credit is not always an easy matter.

Notes receivable having more than one year to run should not be included under current assets.

The value of notes receivable depends upon the solvency of the maker. When the maker of a note fails to pay it at maturity and asks frequently for an extension of time or for a renewal of the note, the holder may well be on his guard against the contingency that the amount due may not be recovered. It is desirable to insist that notes taken from customers be payable at the customer's bank rather than at the place of business of the creditor. The reason for this is that the failure of the maker to pay his note will be called to the attention of his local bank. Rather than have this happen, the maker may be more diligent in finding the means to pay the debt when due than he would be if the note were payable at the office of the creditor.

15. *Trade debtors.*—The amounts due from trade debtors are classified as those which are good, doubtful, or bad. By the term, "good accounts," we understand amounts due from trade debtors which are not due as yet under the terms of sale, and about which there seems to be no doubt of ultimate realization. "Doubtful accounts" are amounts due from trade debtors who either have not paid promptly or about whom certain information has come to hand which makes it appear doubtful whether the full amount eventually will be realized. The term "bad accounts" includes those sums due from trade debtors who failed to pay after the ordinary means of collection had been resorted to, or whose affairs are in the hands of assignees or receivers.

The question of the valuation of accounts receivable due from trade debtors often will present a number of difficulties. The debtors may be temporarily short of funds, owing to poor business conditions or the failure of banks in their vicinity to extend prompt and reasonable accommodations. In certain sections of the country, it is customary for customers to expect long terms of credit. Therefore, the length of time that an account is overdue is not a necessary indication that the amount due will not be realized ultimately. Moreover, the amount being overdue may not be entirely the fault of the debtor. Lax collection methods and failure to render statements properly are sometimes the cause of slow payments.

While the method of "aging" accounts is an admirable one to use in attempting to find out the real value of the amount due from trade debtors, it is not possible to use this method in all cases. Occasionally when a debtor becomes irregular in his payments, the credit man will secure a pledge of collateral of some kind to protect his firm against loss.

For example, if the amount due at the end of the fiscal period is considerably in excess of the amount due at the beginning, the account may be open to suspicion. Notes charged back to the account of the debtor are an indication that would put one on guard. Checks originally given by a debtor and returned by the bank, marked "no funds" are another sign. We must consider also the circumstances and general financial conditions in the country or in the par-

ticular section of the country in which the debtor's business is located. Thus, for example, during the year 1915, conditions in the South were rather serious, owing to the inability of the planters to market their crops advantageously. Business firms generally complained that they were not receiving the proper accommodations from their banks. It is a well known fact that many business houses in the North were financing their Southern customers at that particular time.

This condition, however, was only temporary and while it accounted for the large increase in the amounts due from trade debtors in many of the balance sheets prepared at the end of the year 1915, the situation in 1916 was very different. In fact, many merchants in the North reported that concerns in the South to whom they had extended accommodations or to whom long dating had been given in prior years, were taking up their notes and even discounting invoices within ten days. This fact is mentioned merely to indicate that all the surrounding conditions and circumstances must be carefully weighed in placing a value upon the amount due from trade debtors.

16. *Treatment of bad accounts.*—Even where the account of a trade debtor seems to be bad, the amount should not be written off the ledger until the final discharge of the debtor in bankruptcy or the return of an unsatisfied execution. The reason for this is that, pending final adjustment in bankruptcy, the amount should be left open on the ledger to call the

attention of the proper persons to the fact that the amount is still due. Moreover, dividends are very often subsequently received from accounts which had been considered bad, and if the amount had been written off entirely, an opportunity is given to the dishonest cashier to appropriate these sums to his own use.

17. *Treatment of miscellaneous accounts receivable.*—Amounts due from stockholders for subscriptions to stock, amounts due from officers or employes for loans or amounts due from partners in a partnership, should be stated separately on the balance sheet. If any portion of these amounts is not likely to be recovered, appropriate reserves should be provided.

18. *Interest on notes or accounts receivable.*—When notes, open accounts, or advances draw interest by their terms it should be accrued up to the date of the balance sheet. The amount of interest accrued is to be shown under the heading of current assets and it is a proper credit to income. However, this statement needs to be qualified because it is clear that it would be improper to credit to income accruing interest on doubtful debts or notes receivable. While it may be desirable to accrue the interest for the purpose of showing the total amount due from the doubtful debtor, the amount of interest added to the doubtful debt should be credited to the income account. It should be carried to the credit of the reserve previously created to measure the anticipated loss on realization of the principal sum due.

19. *Different methods of providing for the reserve*

for bad and doubtful debts.—Some provide for the reserve for doubtful debts on the basis of a certain percentage of the sales. If the firm has experience of past years upon which it may rely, this may be the proper and conservative method of providing for this reserve. It has an advantage in that it sets aside insurance for bad and doubtful debts out of the revenue received during the same period. The certain percentage is charged against profit and loss and credited to a specially ear-marked reserve account, and if debts become uncollectible, the amounts are charged against the reserve. While the reserve may accumulate and perhaps be larger in amount than is apparently necessary, yet it must be remembered that we have recurrent periods of dull times or panics during which the percentage of failures and losses from bad and doubtful debts is much greater than usual and no great harm seems to result in allowing the reserve to accumulate, provided the amount is not unreasonably large.

Another method is to charge a certain per cent of the outstanding accounts based upon past experience as a reserve for doubtful debts.

The third method is to provide for those accounts which when "aged" seem to be actually bad or doubtful. The process under this method is to go thru all the accounts that are open on the ledger and list them, showing those which are overdue thirty, sixty, ninety or more days. A reserve is set aside based upon the results obtained, which is estimated to be suf-

ficient to take care of the losses. The disadvantage of this method is that the annual charges against the income account for bad debts are liable to fluctuate. A large amount must be provided in one year and a comparatively small amount in another year. Furthermore debts which apparently are good at the date of preparing the balance sheet may prove doubtful later and no reserve will have been provided for such a contingency out of the profit of the period during which the accounts were created.

REVIEW

State how cash in hand is distinguished from cash in bank. Cite cases in which cash actually held should not figure in the general cash account.

Under what circumstances should investments be valued at cost, and what circumstances justify a departure from this rule?

What distinctions should be made in notes receivable as to the source from which they were obtained? Why?

How should accounts receivable be classified for financial statements?

Explain methods of handling a reserve for bad or doubtful debts.

CHAPTER X

VALUATION AND INTERPRETATION OF CURRENT ASSETS (*Continued*)

1. *Inventories.*—The inventories of a business undertaking are usually shown in a separate group on the balance sheet, under the caption of either "inventories" or "working and trading assets." Included in this group would be the merchandise which a trading concern had on hand at the close of the period. In the case of a manufacturer it also includes the stock of raw material, partly finished goods, finished parts and purchased and finished stock. Occasionally under this caption will be included the inventories of postage, advertising material and prepaid expenses, such as prepayments for advertising, insurance and interest.

In some published balance sheets, accrued interest on notes and accounts receivable is included. It is better, perhaps, to treat unexpired insurance premiums under the caption, "deferred charges to operations." The accruals of interest in favor of a business concern should be included under the group of current assets; prepayments of interest on discounted notes or other obligations should also appear under the group "deferred charges to operations."

2. *Valuation of the inventory of a trading concern.*—The merchandise stock of a trading concern should be valued at the cost laid down in the warehouse or store of the concern. It is proper also to add a rateable proportion of the expenses incurred in the delivery of the merchandise to the storehouse, as well as cartage and carrying charges. On imported goods, the proportion of freight, marine insurance and duties applicable to the stock as yet unsold, may be carried as an asset.

3. *Should inventories be carried at cost or at market price?*—Many authorities state that inventories should be carried at cost or at market price, whichever value is the lower. While perhaps this may be conservative practice, the fact must not be lost sight of, that profits are not made, nor are losses sustained, while goods are on the shelves. It is obvious that a merchant should not carry his inventory at market prices if they are greater than cost, because to do so would be to anticipate a profit which eventually might not be realized. Moreover, the current period would receive the benefit of the inflation at the expense of the succeeding period, and the profit of the current period would consist not only of the profit on merchandise actually sold, but also of the profit taken up thru the inflation of the inventory.

When, however, the market price is lower than cost, the same principle might be applied. The loss will not be realized until the title to the goods has been transferred to a customer, and the loss, since it will

only occur at that time, should be faced in the period in which it takes place. Conservative accounting practice, however, forces us to make provision in advance for expected losses. While it would not be advisable to change the value of the inventory, a provision might be made in it for the loss which is expected to be realized in the succeeding period, thru the medium of a reserve created after the profit on trading operations for the current period has been ascertained.

4. *Raw material inventories of manufacturing concerns.*—Inventories of raw material should be valued at purchase price, plus the cost of getting the goods into the factory.

In some instances, due to careless buying, large stocks of raw material may have been acquired at unfavorable prices. There is, of course, a tendency for the selling price of finished goods to follow closely the fluctuation in the market for raw materials from which they are made. Thus, if a wire manufacturing company acquired a large stock of 20-cent copper, and wire were selling on a 13-cent base, conservative practice would dictate the creation of a suitable reserve for losses which it is clear will ultimately be sustained on the later sale of the manufactured product.

Indirect materials or supplies, such as fuel, lubricating oils and packing material are subject to the same rules of valuation as direct materials.

5. *Work in progress.*—The valuation of work in

progress is not usually a difficult matter when the concern is maintaining an adequate cost system. If, however, no cost system is employed, the valuation of work in progress is a very difficult matter. Theoretically, the work in progress should be valued at the cost of the raw material and the direct labor that has entered into it, plus a rateable proportion of the manufacturing overhead, which has been consumed in the processing of the material. There are some authorities who object to the inclusion of the rateable proportion of the manufacturing overhead in the inventory valuation on the ground that this involves the capitalization of expense items. While this is true, we must remember that the inventory is being valued on the basis of the undertaking as a going concern. In order to prepare income accounts that will reflect the true profits of the undertaking *as a going concern,* it will be necessary to include the rateable proportion of overhead expense.

6. *Finished goods stock should be valued at manufacturing cost.*—The valuation of finished material should be on the basis of the actual cost laid down in the finished stock storeroom. Many business undertakings carry large stocks of finished parts as well as completed articles. Thus, in a concern manufacturing complicated machinery with interchangeable parts, there would be on hand at any inventory date, not only finished and completed machines, but also a large stock of interchangeable parts. Such portion of the administrative expense as is properly

chargeable to the finished stock may be included in the inventory valuation.

It therefore follows, that goods which are unseasonable, out of fashion, or which are in a shop worn condition, should not be valued at cost under any circumstances, but at a price not greater than that which they may be expected to realize on sale.

The principles to be employed in the valuation of inventories of branches have been discussed in the Text on "Accounting Practice" in the chapter on "Branch Accounts."

7. *Treatment of merchandise pledged as collateral for loans.*—Merchandise is frequently pledged as collateral security for loans. It is important that the value of merchandise so pledged shall be set up separately in the balance sheet, or at least that a parenthetical reference be made in the balance sheet in respect to it. In setting up the liability for the money advanced to the undertaking, there should be a contra-reference to the asset side showing the amount due to creditors whose claims are secured in this manner.

8. *Possible deductions from inventory valuations.* —In interpreting the balance sheet of a business, the inventory plays an important part. One who reads the balance sheet should consider the inventory on hand in connection with the sales made during the period. There should be also taken into consideration, in the case of a manufacturing concern, the length of time which it takes to process raw material

into finished wares. Thus, for example, if the annual sales of an organization amounted to $1,200,000, and if it is known that the process of manufacture takes from fifteen to twenty days, while the balance sheet discloses an inventory of $500,000, one must conclude that the valuation of the inventory has been inflated, or that considerable dead stock is included in it or that poor judgment has been used in allowing such a large stock to be accumulated.

Even when an inventory increase seems reasonable, with reference to the increase in payables or the decrease in cash, a further investigation is sometimes necessary. It may be that a great amount of the increase will be due to the increased quantities of raw material on hand. It might happen that the concern was in a position to take advantage of favorable market conditions and purchase a year's supply of raw materials. Thus, a miller might purchase large stocks of wheat which he is in a position either to dispose of as wheat or to manufacture into flour. A silk manufacturer might buy large quantities of raw silk in a favorable market. During the European war, a number of electrical contractors purchased large stocks of raw copper, which they disposed of at considerable profit. Wholesale drug and chemical houses largely increased their stocks at the beginning of the European war and sold them later, realizing very much more than the usual margin of profit. These factors, therefore, must be given consideration before determining whether or not the inventory is

greater than the requirements of the business, or before coming to a conclusion that the management has exercised poor judgment.

9. *Interpretation of current assets.*—The aggregate of the current assets in a balance sheet should be compared with the amount shown in the current liabilities. A concern may have an excess of assets over liabilities and still be forced into insolvency. Legal insolvency is the state of being unable to meet maturing liabilities with the assets on hand. Bankers like to see the ratio of from 2 to 1 to 4 to 1 between the current assets and the current liabilities. On the other hand, judgment must be used in making this comparison. A firm may have invested very heavily in a stock of raw materials, and in order to take advantage of the liberal cash discount allowed, it has seriously depleted the cash account. Consequently, the desirable ratio of 2 to 1 may not exist.

Current assets are the source of dividend disbursements or withdrawals of profits, and if an undertaking cannot safely reduce its liquid assets for this purpose, the distribution of profits should be postponed. While a corporation that has earned profits may borrow the money necessary to pay a dividend, it is questionable whether or not such methods should be resorted to.

10. *Importance of right relation between current liabilities and current assets.*—If the business is of a seasonal nature, the ideal relation between current liabilities and current assets cannot exist. Thus, for

example, the firm might be acquiring large stocks of raw materials, partly finished goods and finished goods to sell in the following season. These amounts would appear as inventories or as working and trading assets, but the liabilities therefor would be included under the current liabilities. Hence, the current liabilities would be increasing in amount, while the finished stocks on hand would not be converted into accounts receivable until a later date, because deliveries of manufactured goods could not be made until the approach of the season. For example, in the fur garment industry, there would be a tendency for the current liabilities to increase, beginning with the first of March and extending into July. The current assets will also decrease, and the inventories will increase. As soon, however, as deliveries are made, the inventories are changed into current receivables, and the normal relations which the credit man or banker likes to see between current assets and current liabilities would then be brought about.

This fact must also be taken into consideration in attempting to determine the turnover of accounts receivable. The volume of sales may vary from month to month, and the ratio existing between current assets and current liabilities will very often depend upon the peculiar conditions and circumstances surrounding the particular business.

REVIEW

State arguments against valuing goods in the inventories at their market price. What rule is to be followed in the case of goods in process of manufacture and finished goods in a manufacturing concern?

What significance is usually attached to a conspicuous inventory increase? Under what circumstances would the usual judgment be erroneous?

How does the contractor handle the problem of equalizing the record of income from month to month?

Describe how manufacturers seek to protect themselves against loss by speculative trading in raw materials.

What is considered the standard ratio of current liabilities and current assets? Does departure from this standard necessarily mean poor business management?

CHAPTER XI

VALUATION AND INTERPRETATION OF DEFERRED ASSETS

1. *Meaning of deferred assets.*—In order that a firm may be able to determine the actual expenses incurred during a period, it is necessary that all expenses applicable to that period shall be charged to the income account. Similarly, if a firm has incurred liabilities or paid out cash for items of expense, the benefit or a portion of the benefit of which will be enjoyed in succeeding periods, it is fair that only that portion which applies to the current period should be charged to this period. Therefore, in preparing the account of a going concern, expenditures which have been made for the benefit of later periods are treated as assets, and known as deferred assets. These assets are also sometimes called prepaid items or prepayments.

It is desirable to point out that it is not always necessary that a cash payment should have been made for such items. For example, insurance may have been effected on the twenty-sixth of December for the period of one year and the amount of the premium may not have been paid in cash at all. The liability, however, should be taken up in the account and the

premium expense should be apportioned as between the closing and the succeeding year; that is on the assumption that the organization is closing its books at the end of the calendar year.

2. *Organization expenses.*—There are a number of expenses incident to the organization of a corporation, such as the incorporation fees, filing fees, legal expenses, expenditures of promoters and many expenses in connection with the issue of securities. It would be proper to charge to this account all the cost incurred in the sale of stock, printing of the certificates, etc., but not expenses in connection with the issue of bonds. This class of expenditures requires an entirely different treatment.

As the organization expenses will have to be incurred only once during the life of the corporation, and as the benefit of these expenses is presumed to exist thruout the life of the business, it is manifestly not proper to charge them against the operating revenue of the first year. On the other hand, it is deemed advisable to write off the amount within a reasonable period, depending somewhat upon the amount of the initial expenditures. The usual term varies from three to ten years.

While it would probably be better practice to permit an assessment of stockholders to such an amount as would be necessary to pay all these expenses, or sell the capital stock at such a premium as would enable the premium to be applied to the reduction of these expenses, as is customary in some countries of

Europe, it is doubtful if the practice will ever be adopted here. Usually, it is very difficult for an industrial corporation in this country to sell its stock at par without giving a bonus of some sort, let alone realizing the premium for it, or organizing it under a plan whereby an assessment to cover organization expenses would be permitted.

3. *Discount on the sale of capital stock.*—The laws of many states do not permit a corporation to issue its capital stock at a discount. As is pointed out in the discussion on treasury stock, the same effect is produced by a manipulation of treasury stock in those states which do not permit capital stock to be issued at a discount. Where, however, the law permits it, the discount allowed on the par of capital stock should be charged to a special account and it may be treated as a deferred charge to expense, or as a deferred asset. It should never be merged with the organization expense.

In its last analysis, the issue of stock at a discount is really the same thing as issuing stock only partly paid. Hence, before any dividends are distributed to the stockholders, the amount of the discount allowed on the original issue of capital stock, should be wiped out thru the surplus. The stockholders who acquire stock issued at a discount are, for practical purposes, in the same status as stockholders who acquire only partly paid stock. While a dividend may be declared to the stockholders out of current profits earned, it is advisable that out of the initial

dividends, an amount should be retained by the company to wipe out the discount account.

4. *Discounts allowed on issue of bonds.*—Mention was made in a previous section that it was improper to charge discount on bonded obligations to the organization expense account. The reason for this is that discount on the bonds is really an adjustment of the interest rate specified in the evidence of debt to the market rate of interest for obligations of similar character. For example, if a corporation issues bonds bearing interest at the rate of say 5 per cent and the market rate of interest for securities of a similar character is 6 per cent, it is obvious that the bonds must be issued at a discount. Conversely, if bonds bearing interest at 6 per cent are issued when the market rate for a debt of a similar character is 5½ per cent, the bonds undoubtedly can be sold at a premium. It follows from this that if a corporation issues bonds at a discount, the effective rate of interest which it pays, would be the sum of the annual interest, specified in the bonds, as increased by a rateable proportion of the discount sustained, or as decreased by a rateable proportion of the premium realized.

The unamortized discount on bonds issued at the date of any balance sheet, is treated as a deferred asset, inasmuch as it is part of the cost of financing and the burden of financing should be distributed over the years during which the use of the borrowed funds is to be enjoyed.

In the past it was the usual practice when bond

issues were floated for the purpose of financing the construction or acquisition of permanent assets, to charge the amount of the discount to the asset account. In its ultimate analysis, it will be seen that as far as the income account is concerned, this practice is exactly the same as carrying the amount of the discount as a deferred asset. If charged to construction, assuming that the life of the asset is coincident with that of the bond, the corporation will be under the necessity of increasing the amount to be provided for depreciation by the amount of the bond discount charged to capital account. As a result, the same amount of discount would be written off each year, only with this difference: that if the discount had been charged to capital, the proportion written off would appear as a depreciation charge, whereas if it is carried as a deferred asset, it will be shown as an increase in the cost of carrying the debt. Since the purpose of accounting is to show facts in connection with the business in their true aspect, it is evident that there can be but one logical treatment of bond discount, and that is as an item of interest or as a part of the cost of financing, to be considered in connection with the actual interest paid in cash each year.

5. *Methods of disposing of the bond discount.*— Probably the method that is most common in practice and at the same time the most convenient, is that of writing off the discount on bond issues equally over the years during which the bonds are to run.

Thus, if the bonds have a life of twenty years, one-twentieth of the amount of discount sustained, would be charged to the income account each year. This is sometimes called the equal instalment method, and while not the most scientific, it is the easiest to apply.

If a corporation has a surplus, it may charge the entire amount of the discount to surplus. In this event, however, the income account of the current year, should be charged with its rateable proportion of the expense of borrowed funds, and only the balance should be charged against surplus. This method is objectionable on the ground that it charges the cost of the borrowed funds against the surplus of prior years, instead of against the income during those years in which the use of the money is to be enjoyed.

Another method of disposing of the discount is to write off each year the proportion of the discount that the sum of the bonds redeemed in any year bears to the total amount of the bonds outstanding.

The effective interest method is the most scientific and it takes into consideration the amount of the discount, the redemption charges, and the nominal rate of interest specified in the bonds. The effective rate of interest is the amount which is charged to the income account each year. A pro rata portion of the charge is credited to the bond discount account, while the balance is credited to the interest payable account. The effective rate of interest can be calculated by the use of an annuity table. This rate should be charged to the income account and the dif-

ference between the effective rate and the amount of actual interest payable in cash, should be credited to unamortized discount on bonds.

6. *Treatment of premiums on bonds.*—Where bonds are sold at a premium, the procedure is the reverse of that where they are sold at a discount. In this case, a rateable proportion of the premium account is to be credited each year to the income account. This is done by debiting the premium on bonds, which is a deferred liability or a deferred credit, to income in the balance sheet, and crediting either the interest expense account or a specially ear-marked account in the income statement. Where bonds are sold at a premium, the effective rate of interest paid by the business is less than the nominal rate.

7. *Other examples of deferred assets.*—The doctrine applied to deferred assets just mentioned is readily applicable to prepayment of rent, interest, taxes and other items of expense. Any portion may properly be capitalized which applies to the succeeding periods and which, from the point of view of a growing concern, is recoverable in benefit of service.

Considerable discussion has arisen over the temporary capitalization of the expense of national advertising. A national advertising campaign for the introduction of any product is usually an expensive undertaking. The benefit may not be reflected immediately and as a rule it is not, but it is assumed that it will be realized in the future. In this connection, it must be considered that a large initial

expense is not the only cost, but that a liberal advertising appropriation probably will have to be made in each succeeding year. The capitalization of expenditures of this kind requires careful consideration of all facts. It is usually unwise to treat this as an asset. The value of advertising is not questioned, but the results of it will be expressed in increased income, and in the development of good-will. As the reader has already noted, the creation of good-will as an asset is not to be justified except when it is actually purchased. While the expenditure for national advertising campaigns may possibly be summed up broadly in the nature of a purchase of good-will, there is a difference in that it is impossible to predetermine the value of it as to benefits to be derived in the future, and its valuation is not made on the basis of past earnings.

It is impossible to lay down a general rule for the valuation of this asset that would apply to all cases. The capitalization of a portion of this expense for a short period is justified. This is only true if one may reasonably assume that the advertising campaign has been carried on judiciously and if the returns seem to indicate that there is a tendency for new business to increase in volume.

In any event, the amount treated as an asset should be set forth clearly under a special section in the balance sheet, so as to indicate its true character.

One must clearly distinguish between the expenses discussed in the preceding paragraphs and those which

are made for the direct benefit of the next season's sales. Thus, advertising literature, expense of advertising, or promotion expense for sales of merchandise to be sold during the next season, may properly be capitalized, so that the amount may be charged against the income from sales in the proper period.

REVIEW

Explain the general nature of a deferred asset. State the best method of handling the organization expenses of a corporation, the discount on the sale of capital stock, and outlays for national advertising.

Describe different methods of treating the discount on bonds sold, and conversely the premium obtained, and state the merits and defects of each.

CHAPTER XII

TREASURY STOCK AND ITS TREATMENT

1. *Treasury stock defined.*—Treasury stock is that stock of a corporation which has once been issued for value and which subsequently has been reacquired thru purchase or thru donation or in exchange for a debt. The term "treasury stock" is frequently misused in place of unsubscribed stock or unissued stock. Treasury stock as defined above, is an asset and represents value received, while unissued or unsubscribed stock does not represent value. As long as the treasury stock is held by the corporation it does not participate in dividends nor can it be voted at the meetings of the corporation.

Creating treasury stock by donation from the incorporators, to whom the stock was originally issued by the corporation as consideration for the purchase of assets, or for services performed, is often made a device for giving away stock as a bonus with bonds or for selling stock below par. The laws of some states prohibit the issue of capital stock for less than par, and where it is desired to do this, a board of directors will go solemnly thru the farce of voting to issue stock for property or for services in greater amount than the property or services are

worth and subsequently acknowledge the donation of stock from those who originally received it. This stock the corporation may sell for any price and in that manner accomplish practically the issue of stock at a price below par.

This procedure is perfectly legal, owing to the fact that the board of directors has sole authority to place a valuation upon assets and the courts will uphold whatever valuation they do place upon assets acquired so long as no fraud can be proved.

As an illustration, let us assume that the owner of a patent organized a corporation for the purpose of working his patent and received in return for the transfer of his patent rights, $50,000 in preferred stock and $50,000 in common stock. Manifestly he is in no better position after this procedure has been effected than he was in the first place and in order that the necessary funds with which to manufacture the device may be forthcoming, he donates back to the company part of his stock to be sold for whatever price it will bring in the market. If the device proves to be successful and in demand, the value of the remaining shares he holds will be considerably enhanced. Custom seems to have sanctioned the booking of treasury stock at par but if it is known at the time of donation what price it will bring, the stock may be taken up on the books at the price it is expected to realize. The complementary credit will be either a capital surplus account, or stock donation account, or a reserve for working capital account. If

any of the stock is sold at less than the price for which it was booked, the difference between the price at which it was taken up on the books and the sales price realized will be adjusted thru the account which was credited at the time the treasury stock was originally taken up in the accounts.

After all the treasury stock has been disposed of, the corporation presumably will have cash or other valuable property representing the proceeds of treasury stock sold and the reserve account or the capital surplus account will still remain open on the books for the adjusted amount.

2. *Disposition of donation reserve credit.*—The next question to be decided is the disposition of the credit in the reserve or donation account. There is no legal reason why this amount may not be distributed in the form of dividends. Since this action would defeat the purpose of the donation if it were taken during the probation period of the life of the corporation and since the donor in all probability will retain sufficient control of the corporation to prevent its disposition for that purpose, it is probable that the surplus will not be disbursed in the form of dividends. Some authorities suggest that the credit be used to write down the inflated assets. However, inasmuch as this would be an admission on the part of the board of directors that the assets were overvalued in the first place, in all probability the board would not take kindly to this suggestion. The amount standing at the credit of the reserve or dona-

tion account will therefore remain until such time as the company is in a fairly prosperous condition when the amount will find its way to surplus and ultimately be distributed.

3. *Acquisition of treasury stock below or above par.*—A corporation sometimes acquires its capital stock in settlement of a debt due to it. The stock may be taken over at par value, or at a price above par, or at a discount. The laws of some states prohibit a corporation from acquiring its own capital stock while in other states this is permitted, with some restrictions. Thus in New York State a corporation may acquire its own stock provided it has a surplus and provided also that the action does not defraud the creditors. If the stock is acquired at a price above par it is evident that the premium paid for the stock constitutes in effect a distribution of so much of the surplus of the corporation to that particular stockholder. Consequently, if the stock is not to be retired and canceled, it is probably the better practice to show it at its par value and charge the premium paid directly against the surplus account. If the stock has been acquired at a discount, it is evident that the corporation has redeemed a part of its capital stock liability for less than par and in this case if the stock is not to be canceled and retired the treasury stock should be shown at its cost price in the balance sheet. If the stock is to be retired, the corporation has sustained a profit equal to the difference between the par value and the price paid for

the stock. This may be credited to the surplus account. Where treasury stock that has once been issued has come back into the treasury and is canceled, it ceases to be treasury stock and reverts to the status of unissued stock thereby reducing the outstanding capital stock liability.

4. *Stock donated to cover a deficit.*—The stockholders of a corporation might donate back part of their holdings of capital stock for sale so as to enable the corporation to wipe out a deficit. If the corporation is organized under the laws of a state that does not permit corporations to acquire their own capital stock, the best way for the transaction to be handled would be to have a trustee receive the stock for the benefit of the corporation. Then, when it has been sold, the proceeds will be turned over to the corporation, which would debit its cash account and credit the deficit account. If the corporation is organized under the laws of a state that permits it to acquire its own capital stock, the treasury stock would be debited and capital surplus account would be credited until the stock was sold. When the stock is sold, cash would be debited and treasury stock credited. And the difference between the price at which the treasury stock was taken up upon the books and the price at which it was sold, would be adjusted thru the capital surplus account. Thus the treasury stock would always appear on the books for the same value as the amount standing at the credit of the capital surplus account. When the entire treasury stock has been

disposed of, the credit balance in the capital surplus account could be transferred to the credit of the deficit account, thus wiping out the deficit.

REVIEW

What is treasury stock? How is it created and why?

Describe the accounting processes when treasury stock is created thru donation of the incorporators.

CHAPTER XIII

INTERPRETATION OF LIABILITIES

1. *Liabilities defined and classified.*—A liability is a claim against a debtor which gives to the creditor a right of action at law. Liabilities are to be distinguished from accountabilities. Thus, a factor who receives a consignment of goods from a shipper is accountable to the shipper for the goods or the proceeds of sales. No liability, however, attaches to the consignee beyond that of taking ordinary care of the property of the shipper, until such time as he has sold a portion of the goods and collected the proceeds. Then the relation of liability arises.

Under American practice the right hand side of the balance sheet, as we have seen, contains two classes of rights, those of the creditors, and those of the proprietor.

The reader has seen in the Text on "Accounting Practice," that capital is not to be considered as a strict liability. Liabilities are broadly classified in two groups,—fixed and current. The former are those liabilities which have more than one year to run from the date of the balance sheet; the latter comprise those liabilities which must be liquidated out of the current assets and are payable at the latest within

one year. Liabilities are also divided into funded debt and unfunded debt. Funded debt consists of debt for which definite provision for repayment has been made. A funded debt is usually secured by a mortgage or other lien. Unfunded debt is that debt which rests upon the general credit of the business and for which no definite provision for repayment has been made.

This classification as between funded debt and unfunded debt is not adopted by all. For example, there are some who class debenture bonds as funded debt, even tho no provision may have been made for the ultimate repayment of the debentures.

Fixed liabilities are also called capital liabilities because they represent the part of the capital income of an undertaking which has been invested in assets of a permanent character or capital assets. The reader has already seen from the Text on "Corporation Finance" the difficulty in many instances of determining from the mere names the character of the various classes of financial instruments or evidences of debts which are found in practice. In the present volume, we are not concerned with the nature of these evidences of debts or with the security underlying them. From the accounting standpoint, we are interested in seeing that the character of the debt is stated clearly in the accounts.

2. *Bonded debt.*—A bonded debt of a firm consists of that debt which is evidenced by an issue of bonds. It may be secured or unsecured and provision

for its repayment may or may not be made. In order to determine the nature and kind of bonds shown in a financial statement, it may be necessary in some instances to obtain an abstract of the instrument and indenture underlying these bonds, assuming, rightfully, that such an instrument exists. Bonded debts may be secured by a pledge of real property or by a pledge of personal property. The distinguishing features of each class will be the security, if any, underlying the debt; the rate of interest; the date of maturity and the interest dates. All obligations of a business which agree in all respects with the four classifications mentioned above should be shown in the same account.

Where a debt is secured by a mortgage or a pledge of personal property, the property covered by the mortgage should be plainly indicated in the title of the account, thus, "first mortgage 5 per cent bonds," or "collateral trust 5 per cent bonds." Where a mortgage has been issued underlying the bonds, it is evident that there has been a definite pledge of a fixed amount of the company's property and the real liability is the amount of the mortgage and not the amount of the bonds which may be issued and outstanding. When the bonds are secured by a mortgage, unissued bonds differ from unissued stock. The unissued bonds have a value, because underlying them there is a pledge of property and it would be preferable to treat unissued bonds in a balance sheet as an asset, because they represent a security which

the officers of the organization may dispose of at any time. They may also be used at any time as security for advances or for other obligations or debts. The entire authorized issue of bonds would appear as a liability for the full amount of the mortgage shown. Unissued stock, however, has no value, nor does value attach to it until it has been exchanged for cash or its equivalent. Therefore, it is important that the amount of all mortgages and pledges of property to secure evidences of debt be set forth clearly in the balance sheet.

Where the amount of bonds issued and outstanding is less than the amount of the mortgage underlying the issue, it is important to note the amount of the property pledged, so that any one who reads the balance sheet of the organization may be able to determine what assets remain unpledged.

Overissue of bonds is usually guarded against by clauses in the indenture providing for registration and certification. The fact that these requirements have not been followed does not alter the status of unissued bonds. Where part of the unissued bonds have been registered and part have not, the facts will usually be stated in the balance sheet. The necessity of showing the amount of the mortgage underlying the bonds compels this treatment to be applied to unissued bonds.

Where, therefore, more than one mortgage or lien exists on the whole or any part of the property of an enterprise, it is important to have the mortgages and

liens listed separately in the balance sheet, and to describe the property upon which liens attach.

It will occasionally happen that the unissued evidences of debt secured by a mortgage of a corporation may be given as collateral security for loans obtained from banks. When this is the case, the loan from the bank should be stated as a current liability, if it has less than a year to run. A notation showing the amount of bonds which have been pledged as collateral security for the loan should be appended.

The difference between the value of the property which is pledged and the amount of debt evidences issued against it, constitutes the equity of the proprietor.

In those cases in which it is not possible to show conveniently the nature of the debt and the property pledged as security in a balance sheet, a separate schedule should be attached to the balance sheet disclosing this information.

3. *Mortgage debts and bonds.*—A concern may mortgage its property, in which case the mortgage is usually given to one individual on a single bond secured by the mortgage. While the legal debt is the bond, and the mortgage is merely security for it, yet in the last analysis the real debt is the mortgage.

Real estate mortgages are conveyances of title on the condition that the title of the mortgagee shall be defeated when the debt is paid. They are executed, acknowledged and recorded like a deed. Chattel mortgages which cover personal property do not usu-

ally convey title. They are usually for shorter terms than real estate mortgages and for that reason are usually classified under the heading of current liabilities. In the majority of cases, chattel mortgages are given as additional security for merchandise purchased on credit or for movable property purchased on credit. Thus, for example, a man may sell merchandise to a firm on open account, taking in exchange a chattel mortgage on the stock as additional security. If such mortgages are not disclosed in the financial statement, one who is about to grant credit on such a balance sheet would be greatly misled, because the balance sheet would appear to show more unpledged assets than the borrower had.

Interest on bonded debt or on mortgage debt should be accrued because interest accrues from day to day and at the time of stating the accounts, the interest accrued should be shown in the balance sheet as a current liability.

4. *Notes payable.*—Classified under this head would be the promissory notes given by a firm to its creditors or issued as an accommodation to others. These are usually payable in less than a year, and therefore would be classified under the current liabilities. If the notes bear interest, the interest should be accrued up to the date of the balance sheet. If the firm has accepted a draft or a bill of exchange, it may be handled in the same account, as the draft is the same as a promissory note for all practical purposes. Where it is desired to keep the two classes of instru-

ments separate, this may be done by creating one account for notes payable and another account for drafts payable.

5. *Trade creditors.*—Included under this caption would be the amount due for merchandise or property purchased, as well as the amount due for expenses of various kinds incurred in the ordinary course of business.

6. *Salaries and wages accrued.*—This account would include the amount due and unpaid for claims of officers and employes or amounts due partners in respect of salaries and wages. The amount set up as a liability should be the amount accrued from the last date of payment.

7. *Other liabilities.*—Taxes accrued up to the date of a balance sheet should be shown as a current liability. The account "taxes accrued," would also include the estimated portion of the Federal Income Tax accrued up to the date of the balance sheet. Rents accrued, royalties accrued and dividends declared and payable are examples of other liabilities that may be found in a balance sheet.

With reference to dividends, it is to be noted that until the board of directors has met and actually declared and published the declaration of a dividend, that dividend is not a liability. It follows from this that unpaid dividends on cumulative preferred stock, not declared by the board of directors, are not a liability of the corporation. Nevertheless, they should be stated in a footnote in the balance sheet, because

the failure to do so would mislead possible investors in the common stock of the undertaking.

8. *Ratio of current assets to current liabilities.*—The reader of the balance sheet of an undertaking will compare the ratio existing between current liabilities and current assets. For example, the balance of the cash account would be considered in connection with the amount of wages and current liabilities due. With reference to loans payable, one would look for fluctuations. Thus, during the season in which an undertaking is acquiring its merchandise and getting it ready for market, there will be a constant increase in the amount of the outstanding accounts and notes payable. At the end of the season, or at the end of the normal fiscal year, one would expect to see the accounts payable reduced to an amount representing perhaps current bills not yet due. One would also expect to find that all the bank loans had been paid off. If loans for a relatively large sum were outstanding at the end of the normal fiscal period or at the end of the season, it would be an indication that the concern was financing itself permanently on borrowed capital. This proceeding might be a dangerous one, because the loan might be called at any time and the firm might be unable to repay it on demand. A business should have a sufficient amount of owned capital to take care of its ordinary financial needs at the end of the fiscal or season period.

9. *Deferred liabilities or deferred credits to income.*—Deferred credits to income consist of those

items received in the current period which have not as yet been earned. These items should not properly be credited to income in the present period and the credit to income is deferred until later. From the point of view of proprietorship, they are liabilities in that they represent the liability of the organization to deliver service in a later period. Thus, for example, a tenant may pay rent in advance and at the date of the balance sheet a certain portion of the rent paid in advance will have been earned and a portion will be unearned. The portion unearned is set up as a deferred credit to income because it represents the rent service which the tenant is to enjoy from the landlord during the following period. Deferred liabilities are the reverse of deferred assets.

10. *Contingent liabilities.*—Contingent liabilities, as the reader will recall, are those which may or may not occur upon the happening of a certain event or contingency arising out of past transactions. The most common examples of contingent liability are those of liability under notes receivable which have been discounted and liability as guarantor of the principal or interest on the debt of another firm. The important features of the contingent liability on notes receivable discounted, have been considered. Liability as guarantor for the principal and interest of the debt of another is such a liability as a holding company might assume as guarantor of the principal and interest of the debt of a subsidiary. Contingent liabilities will be offset by contingent assets. Thus,

the contingent asset offsetting the contingent liability for a note receivable discounted is the claim which arises against the maker of the note if the liability becomes actual. Of course, the value of the contingent asset depends upon the ability of the maker to pay. Where one has assumed contingent liability as guarantor of the principal and interest of the debt of another, the guarantor usually protects himself by taking security. If the security taken by the guarantor is equivalent to the amount of his liability, the contingent asset is equivalent to the contingent liability; otherwise, of course, a loss results.

It is not customary to show contingent assets and contingent liabilities in the balance sheet proper. Nevertheless, contingent liabilities should be stated in a footnote in the balance sheet, if not included in the balance sheet itself. If both contingent assets and contingent liabilities are included in the balance sheet, they will be grouped under their appropriate caption.

11. *Conclusions to be inferred from the liabilities.*— Having thus considered the nature, interpretation and the valuation of assets and liabilities, it remains now to consider what inferences may be drawn. The capital assets or the fixed assets are usually acquired in part by the issue of fixed liabilities and capital stock. In all cases there should be a reasonable equity in the fixed property. In other words, bondholders and mortgagees ought to be protected by a reasonable equity against the possibility of loss. What this

equity should be depends upon circumstances, but in practice it should seldom be less than 25 per cent.

Creditors on open accounts as well as bondholders are also interested in the relation which exists between current assets and current liabilities. There should always be a reasonable excess of quick assets over quick liabilities in every concern that issues mortgaged or bonded debts. Here, again, ratios vary because the conditions will vary in the different lines of business. In the meat packing industry, the quick assets will show a much better ratio than in the textile industry, because of certain differences in the nature of the business transactions. At any rate, under ordinary circumstances, there should be at least twice the amount of quick assets as of quick liabilities. A large amount of cash on hand and a large amount of accounts payable might be an indication of careless management. If the accounts payable are subject to cash discounts, it might be more profitable for the organization to increase its loans and use the cash in the reduction of accounts payable thru taking advantage of all discounts. A business cannot stand still for any length of time. It will either advance or go backward.

Unfavorable conditions that do not show improvement will be due to the following possible causes. It may be that the machinery and processes which are in use are not the best to be had or the most modern that science has developed. Perhaps new blood is necessary in the sales organization or in the operating de-

partment. Suggestions may sometimes be obtained from a study of the methods of competitors.

A careful study of all those factors and an impartial analysis of financial statements by all those interested in any business, will benefit not only the business men themselves, but also the vast army of employes who are dependent upon the prosperity of those who foot the pay-roll.

The following is an illustration of an Income and Profit-and-Loss Statement and a Balance Sheet of a manufacturing establishment.

THE ACME METAL PRODUCTS COMPANY

General Balance sheet—December 31, 1911.

ASSETS

Capital Assets:		
Land	$100,000.00	
Buildings	150,000.00	
Machinery and equipment	74,360.00	
Stocks and bonds of controlled companies.	200,000.00	
Furniture and fixtures	20,000.00	
Good-will	150,000.00	
Total capital assets		$ 694,360.00
Working and trading assets:		
Materials and supplies inventory	$ 66,838.20	
Finished goods inventory	172,727.50	
Total working and trading assets		$ 239,565.70
Current assets:		
Cash on hand and in bank	$ 43,960.00	
Accounts receivable	109,870.00	
Notes receivable	18,000.00	
Total current assets		$ 171,830.00
Sinking fund		15,000.00

Deferred charges to expense:		
Prepaid insurance	$ 7,500.00	
Advertising paid in advance	2,175.00	
Rent paid in advance	100.00	
Organization expense	12,000.00	
Total deferred charges		$ 21,775.00
Total assets		$1,142,530.70

LIABILITIES AND CAPITAL

Capital Liabilities:		
First mortgage bonds authorized	$400,000.00	
Less—unissued	200,000.00	
Issued and outstanding		$ 200,000.00
Current Liabilities:		
Accounts payable	$ 5,896.00	
Notes payable	10,000.00	
Dividends payable	40,000.00	
Interest accrued and due	10,000.00	
Interest accrued not due	2,000.00	
Royalties accrued	7,960.00	
Taxes accrued	3,500.00	
Wages accrued	1,500.00	
Total current liabilities		$ 80,856.00
Reserves:		
For depreciation—machinery and equipment	$ 22,690.00	
" " —buildings	48,000.00	
" " —good-will	16,290.00	
Sinking fund reserve	15,000.00	
Insurance reserve	8,000.00	
For doubtful accounts	12,570.00	
Total reserves		$ 122,550.00
Capital Stock:		
Preferred:		
Authorized issue—6,000 shares—par value $100 each	$600,000.00	
Less unissued	100,000.00	
Issued and outstanding	$500,000.00	
Common:		
Authorized, issued and outstanding—2,000 shares, par value $100 each	200,000.00	
Total capital stock, issued and outstanding		$ 700,000.00
Surplus—December 31, 1911		39,124.70
Total liabilities and capital		$1,142,530.70

Statement of Income and Profit and Loss for the year ended December 31, 1911.

Gross sales			$720,290.00
Less—returns			14,063.00
Net sales			$706,227.00
Deductions from sales:			
Trade discounts		$60,386.00	
Allowances:			
Defective goods	$ 7,892.00		
Breakage	8,920.00		
Rebates	44,825.00		
Outward fgt. and ctge.	7,890.00	69,527.00	
Total deductions from sales			$129,913.00
Amount realized on sales			$576,314.00
Cost of goods sold: Schedule No. 1			420,300.00
Gross profit on sales			$156,014.00
Selling expense:			
Salaries—sales manager and clerks		$ 8,000.00	
Salesmen:			
Salaries		11,500.00	
Traveling expenses		3,300.00	
Commissions		4,000.00	
Advertising		4,580.00	
Entertaining customers		1,200.00	
Total selling expenses			$ 32,580.00
Selling profit			$123,434.00
Administrative expenses:			
Salaries of officers		$25,000.00	
Salaries of general office clerks		12,000.00	
Directors' fees		1,000.00	
Printing and stationery		4,500.00	
Postage		3,060.00	
Telephone and telegraph		2,700.00	
Traveling—officers and clerks		1,500.00	
Legal expenses		4,006.00	
Total administrative expenses			$ 53,766.00
Net profit on sales—income from operations			$ 69,668.00

Other income:		
Interest on bonds owned	$ 5,000.00	
Dividends on stocks owned	6,000.00	
Cash discount on purchases	300.00	
Interest on bank balances	265.00	
Interest on notes receivable	480.00	
Rent	1,000.00	
Total other income		$ 13,045.00
Total income		$ 82,713.00
Deductions from income:		
Interest on bonds	$10,000.00	
Interest on notes payable	3,000.00	
Cash discount on sales	1,750.00	
Rent	300.00	
Insurance expense	12,000.00	
Taxes	15,750.00	
Royalties	16,525.00	
Total deductions from income		$ 59,325.00
Net income profit and loss		$ 23,388.00
Profit and loss credits:		
Profit on sale of securities	$20,000.00	
Bad debts previously written off—now collected	14,000.00	
Total profit and loss credits		$ 34,000.00
Total		$ 57,388.00
Profit and loss charges:		
Provision for doubtful accounts	$ 5,000.00	
Provision for depreciation of bldgs.	10,000.00	
Provision for depreciation of good-will	3,000.00	
Organization expense—written off	2,000.00	
Total profit and loss charges		$ 20,000.00
Profit and loss—surplus for year		$ 37,388.00
Profit and loss—surplus at beginning of year		49,736.70
Gross surplus at December 31, 1911		$ 87,124.70
Appropriations of surplus:		
Insurance reserve	$ 3,000.00	
Sinking fund reserve	5,000.00	
Dividends declared	40,000.00	
Total appropriations		$ 48,000.00
Corporate surplus at December 31, 1911		$ 39,124.70

THE ACME METAL PRODUCTS CO.

Schedule showing Cost of Goods Sold during Year ended December 31, 1911.

Cost of goods sold:	
Manufactured cost:	
Prime cost:	
Material and supplies consumed	$265,506.92
Labor—direct	90,769.03
Total prime cost	$356,275.95
Manufacturing overhead:	
Labor—indirect	$ 29,207.04
Power	9,294.26
Factory supplies	3,987.25
Depreciation—machinery equipment	2,713.29
Salaries—factory manager and clerks	22,038.90
Factory office expense	1,200.38
Factory general expense	2,344.97
Total manufacturing overhead	$ 70,786.09
Total manufacturing cost	$427,062.04
Finished goods—deduct increase in inventory	6,762.04
Total cost of goods sold	$420,300.00

REVIEW

State the distinction between a liability and an accountability, and discuss the various kinds of liabilities.

Explain the nature of funded debt as distinguished from current liability.

What accruals are to be considered as liabilities?

What are contingent liabilities and contingent assets, and how far should they be recognized in the balance sheet?

What information can be looked for in a scrutiny of the liabilities?

CHAPTER XIV

SURPLUS, RESERVES AND DIVIDENDS

1. *Definition of surplus.*—By the term surplus, is meant the intrinsic value of all the assets of a firm, over and above its liabilities and outstanding capital. Intrinsic value is to be distinguished from reproductive value in that the former relates to the actual cost of the assets acquired, less the depreciation sustained since acquisition, and the latter, to the cost of duplication on the basis of ruling market prices.

The author is a firm believer in the rigid cost theory of value in so far as the books of account are concerned. It should be borne in mind that purchase price may not represent the true value. This is due to the fact that assets can be purchased at a cost greater or less than the true value. Some authorities justify the use of true value based upon a properly made appraisal as the basis for placing assets on the books.

2. *Kinds of surplus.*—Open surplus is that which appears on the books in the form of surplus, reserves or undivided profits.

Hidden surplus is represented in the form of secret reserves as a result of accumulation of profits that do not appear on the books.

Surplus may also be distinguished as free and restricted. By the former is meant that form of surplus that represents profit available for distribution; by the latter, a profit accumulation which for one reason or another is to be retained in the business.

3. *Relative importance of surplus and assets.*—The importance of the surplus account is due to the fact that the stockholder finds reflected there the net results of the company's operations; he measures the value of the company's stock by the fluctuations in the surplus account. The importance of using the proper basis for the valuation of the firm's assets thus becomes apparent, for an incorrect valuation is at once reflected in the surplus account.

4. *Sources of surplus.*—Broadly speaking, surplus may be derived from the following sources:

(1) from profits as a result of business operations;
(2) from a revaluation of fixed assets;
(3) from an original investment at the time of organization or as a result of reorganization.

5. *Surplus resulting from business operations.*—The reader is already familiar with corporate surplus resulting from business operations. He will also recall that inasmuch as a business may have primary and secondary operations, surplus will necessarily be either from primary or secondary operations, or from both.

6. *Importance of distinguishing between capital and revenue expenditure.*—It is self-evident that there will be an overstatement of the surplus if all the

elements of cost have not been included in the profit and loss account. One of the problems in that connection is the proper allocation of expenditures to capital and revenue. If an expenditure that should have been charged to revenue is charged to a capital account, the assets will be increased and the expenses will be decreased by the same amount. Conversely, if an item that should have been charged to capital is charged to revenue, the assets will be undervalued and the expenses will be correspondingly overstated.

In the first instance, the surplus will be erroneously increased, and in the second case it will be less than it should be. The general principle to bear in mind is that it is allowable to charge to revenue any expenditure that does not enlarge the field of operations or that results in an increase in earning power, or in a decrease in the expense of conducting the business. Inasmuch as the application of these principles oftentimes is attended with difficulty, it is important in reading financial statements to consider what has been the practice of the company in connection with expenditures, as reflected by the surplus.

7. *Depreciation as an element of cost.*—In considering the surplus, the fact that depreciation is an important element in the income account must not be overlooked. If the depreciation of both fixed and circulating assets has not been provided for by charges against earnings, the surplus account will be overstated. Depreciation on fixed assets may be broadly viewed as a sort of rental that the operating

department of a business pays for the use of the assets. Depreciation on all circulating assets, such as accounts receivable and inventory, should also be provided for, before net profits are shown.

8. *Reserves that are not part of surplus.*—It is maintained by some accountants that all reserves are a part of surplus, but such a contention is not true of any reserve created to measure depreciation or to offset an anticipated loss on the realization of accounts receivable. This holds good notwithstanding the fact that reserves of this character are frequently found on the liability side of a balance sheet included with other reserves. The use of reserves for the purpose of adjusting the valuation of assets in the balance sheet is purely a question of bookkeeping expediency. If a loss equivalent to that shown in the reserve accounts has been sustained, or is anticipated, the shrinkage may be credited directly to the asset account; at the same time the profits of the period may be reduced by the same amount, or the decline in value may be credited to a reserve account. When decreases in value are credited to a reserve account the record will be clearer if the reserve, being an adjunct, is offset against the asset affected when the balance sheet is prepared.

9. *Intercompany profits on inventory should be eliminated from surplus.*—The reader will recall the discussion with regard to profits of holding companies as given in Chapter VI. Subsidiary companies frequently do business with one another and the transac-

tions between companies will usually be invoiced at or near the prevailing market prices. Let us assume that Company A, a mining company, sells the greater portion of its output to Company B, which operates a steel mill that turns out, in the form of bars or blooms, material received from Company A. Let us further assume that the product made by Company B is shipped over Railroad C, owned by the holding company to another subsidiary, Company D, which operates a rod mill. Both Company B and Company D sell to outsiders as well as to Company E, which we shall assume is another subsidiary company, engaged in the manufacture of certain specialties. The entire output of Company E is disposed of to outsiders.

The subsidiaries will have on hand, included in their material inventories, at the close of the fiscal period, goods which have been purchased from other subsidiaries and upon which the latter have made a profit. The raw material of Company D is the finished product of Company B; the finished products of Company B and Company D constitute the raw material of Company E.

In the preparation of a balance sheet of the holding company, a consolidation of the assets and liabilities of the subsidiaries will make it possible to take up, as inventory of materials, certain quantities purchased from other subsidiaries, upon which the latter have already made a profit which is represented in the surplus accounts of the subsidiaries. Each of the sub-

sidiaries has a separate corporate existence and, as far as its own accounts are concerned, has made a valid profit. It is important to remember, however, that from the standpoint of the entire aggregation no profit has as yet been realized on that material which was sold by one subsidiary and remains on hand in the inventory of another subsidiary.

That this is an important factor affecting surplus may be seen from an analysis of the balance sheet of the United States Steel Corporation for the year ending December 31, 1915. The inventory of raw material on hand in the subsidiary companies at that date, amounted to $161,113,900. The amount of intercompany profits represented in inventories of the subsidiaries on hand on the same date amounted to $20,109,723.39.

10. *Dividends of subsidiary companies available to the parent company.*—The dividends received by a holding company on the stock of subsidiaries which it owns may not in all cases be properly credited to the surplus account of the former. In many instances the subsidiaries whose stocks were acquired possessed a surplus at the time of consolidation. The price that the holding company paid for the stock of the subsidiary implied the existence of such surplus. If, for example, the capitalization of a subsidiary company amounted to $100,000 with an accumulated surplus of $30,000 the purchase price of a $100 share in such a company would probably be about $130 per share. If the stock were purchased by the holding

company at this price, it would appear in its investment account at a value of $130,000.

Let us assume that the holding company increases its surplus account to $50,000 during the next year, and that the board of directors votes to distribute the entire surplus as a cash dividend. The parent company is the sole stockholder and receives a check from the subsidiary company for $50,000. But not all of this amount is to be considered by the holding company as income. Only that portion of the dividend which represents a distribution of surplus profits earned since the stock was acquired can be treated as earnings. The reason is that the distribution of the entire surplus in the form of a dividend has reduced the value of the capital stock of the subsidiary to a book value of approximately $100 a share. Consequently the value of the holding company's investment has been reduced to $100,000. Inasmuch as this investment is carried on the books of the holding company at $130,000, it is clear that the dividend of $50,000 that is received by the holding company must be divided into two parts, viz., $30,000 to be credited to its investment account—this will reduce that account to $100,000; and $20,000 to be credited to its surplus account.

11. *Surplus from sale of fixed assets.*—Surplus results from the sale of fixed assets when any portion of the fixed property is sold for an amount greater than the book value of that property. Sales of this character may be broadly grouped in two classes: sales

of isolated units, and sales of magnitude, in which the property disposed of consists of an integral part of the operating equipment.

Before a decision is made in regard to the disposition of such profits it is necessary to inquire whether or not proper provision has been made for the depreciation of the remaining units of equipment. The fact that a profit has been realized upon the sale of an isolated unit of the plant equipment is not an indication that a true profit has been realized. The price paid by the new owner might represent elements other than true value. For example, an undertaking engaged in the manufacture of war munitions might pay a high price for a plant particularly suited to its needs, in order to fill a contract which it would be unable to accept without securing such a plant. But if investigation shows that the proper provision for depreciation on the remaining units has been made, the profit can undoubtedly be credited to the surplus account. It is, however, more conservative to credit the amount of the profit to the reserve for depreciation provided on the remaining units.

Sales of magnitude may be illustrated by the case of a company engaged in manufacturing office desks and chairs, which maintains a separate establishment for the manufacture of each article. Let us suppose that the company decides to discontinue the manufacture of desks and to concentrate its energies upon the manufacture of chairs. If the entire plant used in the manufacture of desks is disposed of at a profit,

and if the accrued depreciation on the remaining equipment is adequate, the entire profit that is realized may be properly credited to the surplus account. Such profits do not, however, constitute an addition to the current income account of the company, and should therefore appear as surplus adjustments.

12. *Profits resulting from the sale of investments.*—Business firms from time to time acquire investments in the securities of other companies. If such holdings subsequently are disposed of at a profit it is proper to credit the surplus account. It is assumed that the company will have provided a reserve for the decrease in the value of any other investments of this character that it may have. If this has not been done, it would be better to credit the profit realized on the sale of investments to a properly designated reserve account, since in this way the loss sustained on other investments may be offset.

13. *Profits resulting from revalution of fixed assets.*—It may be necessary or advisable for a board of directors to revalue the fixed assets. No matter how carefully a company may attempt to determine in advance the proper allowances for depreciation, the estimates are often incorrect. If the property has been revalued by a competent appraiser, there is probably no objectition to showing the increased value on the books. On the other hand, conservative accounting practice often suggests another disposition of the matter. At times it is preferable to allow the values to remain unchanged rather than to swell the surplus

account by credits due to revaluation. As the depreciation charges for subsequent periods may be reduced, this method has all the advantages and none of the defects of the other.

Evidently, if the appraisal should reveal the fact that the property has been overvalued, the surplus account should be charged with the amount of the overvaluation. It is also clear that the revaluation should be made in good faith, and not for the purpose of wiping out a deficit from operation. In some instances a corporation will acquire the physical property of a business undertaking by giving in payment an amount of capital stock in excess of the value at which the assets stood on the books of the vendor. The difference between the cost price to the purchaser and the book value of the assets may be debited to the good-will account of the purchaser; or the board of directors may place upon the assets acquired, new valuations that will absorb the excess price paid.

The practice of concealing the value of the intangible property purchased has been strongly condemned, and it is interesting to note that some corporations have altered their accounts so as to disclose in their balance sheets the value of the intangible property. The subject is discussed in an interesting manner in an article in the *Journal of Accountancy* (August, 1916) in which the author gives a list of the corporations that now state separately the values of intangible assets.

14. *Entries on revaluation necessary to adjust*

property accounts.—If the depreciation of prior periods was credited directly to the asset account, the increase in value shown by the appraisal should be debited to the asset account; this would make it agree with the appraised value. The credit should be made to surplus account. If, however, the depreciation of prior periods was carried in a reserve account, the increase in the book value of the property should be effected by transferring as much of the excess as is necessary to offset the excess credit.

15. *Value of fixed assets is not affected by economic conditions.*—The value of the fixed assets that a company uses in its operations is not affected by economic conditions. This principle applies also when the value of fixed assets declines, or when the cost of duplicating fixed assets is lower than the book value of the assets.

To illustrate, we will suppose that a company has in its equipment account a record of five engine lathes which cost $400 each, and on each of which depreciation, based upon the normal life of such machinery, has accrued to the amount of $100. The fact that lathes of this kind can now be purchased in the open market for $275 each, owing to the decline in material and labor cost, would not justify the company in reducing the value of the lathes upon its ledger. This is true so long as the lathes are serving the purpose for which they were purchased, and so long as the depreciation rate is sufficient to take care of the amortization of the assets to residual value at

the expiration of their effective life. This being the case, changes in value, that are the result of economic conditions should be ignored.

16. *Entries to record increase due to economic causes.*—It is not considered good accounting or financial practice to swell the surplus account with profit resulting from economic causes. If it is desired to give expression to the fact that the fixed assets have increased in value because of economic changes, the amount of the increase should be credited to an account "Reserve for Appreciation," and not to the surplus account. Otherwise, stockholders would be misled into the belief that the dividends which they are receiving are a part of the earned surplus. It is true, however, that a corporation may legally reflect such increased valuation in its surplus account, and by disposing of an amount of capital stock for cash, equivalent to the increase in value, it may distribute the cash in the form of a dividend. But even in this procedure, fairness to the stockholders requires that notice be given as to the source of the dividends.

REVIEW

Define surplus and distinguish between the several kinds of surplus.

In what different ways can surplus arise?

How do inter-company profits on inventory affect the calculation of surplus?

When is it proper to create surplus by revaluation of fixed assets? What attention should be given to changes in economic conditions in valuing assets?

CHAPTER XV

SURPLUS, RESERVES AND DIVIDENDS (Continued)

1. *Surplus contributed at the time of incorporation.*—Banking corporations and similar institutions very often sell their initial issue of capital stock at a premium in order that they may begin business with a surplus. The amount of the premium will ordinarily be credited to surplus account and the ordinary profits from operation will be carried to an undivided profits account. From time to time the balance standing to the credit of the surplus account may be further augmented by certain amounts transferred from the undivided profits account.

This does not hold true in case of industrial or transportation corporations. Railroads, for instance, under the jurisdiction of the Interstate Commerce Commission, are required to credit the premium realized in this manner to a permanent surplus account suitably designated.

In the re-organization of industrial corporations the newly organized company may acquire the assets of the old company, in exchange for issues of stocks and bonds. The par value of these stocks or bonds may be considerably less than the fair value of the assets acquired. In this event, if the assets are

placed on the ledger of the new company at their bulk value, a surplus will be created equal to the difference between the value of the assets acquired and the par value of the securities.

Surplus may also be created in the case of reorganization by reducing the par value of the outstanding stock by an amount more than sufficient to wipe out the impairment of capital.

2. *Distribution of initial surplus.*—Surplus created in any of these ways should not be distributed in the form of ordinary dividends. Such action would either defeat the purpose for which it was created or would result in misleading stockholders who were not aware of the source of the dividends. It is always advisable when a board of directors votes to pay ordinary dividends, using for such purpose any part of the surplus created in the manner described, that the stockholders should be frankly advised of the fact.

3. *Secret reserves.*—Two common methods of creating secret reserves are : (1) providing for a greater reserve for depreciation on fixed property than conditions warrant; (2) making extended provision for bad and doubtful accounts.

Banking institutions frequently provide for such reserves by making an understatement of the value of their investments.

If items are charged to a revenue account that should have been charged to a capital account a secret reserve is created. Similarly, eliminating assets from the balance sheet will establish a secret reserve.

An overstatement of a liability will, of course, reduce the net worth shown in the balance sheet and correspondingly reduce the surplus, thereby creating a secret reserve. One should be careful to distinguish secret reserve from surplus that is the result of a conservative valuation of assets. Prudence requires not only that assets be conservatively valued, but also that all losses be anticipated.

4. *Purpose of secret reserves.*—The creation of secret reserves is often practised for the purpose of reducing the amount of the visible surplus so as to withhold the profits of the business and, at the same time, prevent stockholders from demanding distribution of the true surplus in the form of larger dividends.

Ordinarily, secret reserves constitute a source of strength because extraordinary losses that could not otherwise be taken care of may be charged against them. Moreover, they enable the directors of a company to know fairly definitely whether or not the surplus should be retained in the business.

Another advantage of secret reserves is that they permit the maintenance of a uniform dividend rate over a period of years. For example, if depreciation on the fixed assets has accrued during prosperous years at a higher rate than is actually necessary for the welfare of the business, the company need not make any provision for depreciation when a lean year is encountered. Thus, in a year when earnings were low, there would be no necessity for providing for

depreciation. The secret reserve could be drawn upon and all the earnings of the period would be available for dividends. The declaration of a uniform dividend rate over a definite period of years results generally in the establishment of uniform prices for the securities of the company in the open market.

5. *Other purposes of secret reserves.*—Public service corporations sometimes create secret reserves for the purpose of reducing the surplus so as to avoid agitation on the part of the public for a reduction of rates. Certain states have now adopted a uniform system of accounts—a system that effectually prevents this practice. But the uniform system of accounts does not prevent utility corporations from making charges to revenue, contrary to the established regulations, unless the capital accounts are thoroly audited by a commission.

The principal objection to a secret reserve is the fact that it is just as incorrect from an accounting standpoint to undervalue assets as it is to overvalue them. Then, too, a secret reserve offers a temptation to managers to utilize this means of concealing losses due to speculation or mismanagement. Furthermore, a secret reserve is sometimes the cause of injustice to stockholders who may dispose of their stock for less than its actual value, because the board of directors has never informed them of the presence of the secret reserve. And finally, there is the objection that it is impossible to prepare true com-

parisons of valuation or of earnings from the reports of a company that has a secret reserve.

6. *Propriety vs. impropriety of secret reserves.*—While the propriety of creating a secret reserve is to be questioned for the reasons that have been mentioned, many conservative companies provide for it. Furthermore, conservative business men countenance the practice, provided it is kept within reasonable limits. In the last analysis, it would seem that if the purpose of the secret reserve is good and the directors of the company are honest, no great harm can result.

7. *Disposition of the surplus.*—As the reader already knows the surplus of a company may be distributed in the form of dividends and it may be reinvested in the property. Surplus in the form of dividends may be distributed as cash, as capital stock, or as assets.

An example of the distribution of surplus in the form of assets occurred recently in the case of a well-known powder manufacturing company which distributed dividends in the form of Anglo-French bonds.

Re-investment of surplus in the property may be made in the form of specific investment or general investment. If the surplus is invested either in special funds or in fixed property, it is usually so ear-marked. If the surplus has not been invested in funds or in fixed property, it is generally represented in all of the assets.

8. *Surplus does not necessarily mean cash.*—Current profits are usually, altho not always, represented by cash or other liquid assets. The fact that a company has a surplus is not always an indication that it is able to pay its debts. If the quick assets are not sufficient to enable the company to meet its maturing obligations, it may be forced into the hands of a receiver, even tho it has a surplus. It is therefore important to bear in mind that the needs of a corporation, as regards the liquid assets, largely govern both the management and the distribution of the surplus.

9. *Distribution of dividends.*—The basic principle of a business organization is that it shall make money for its investors. The profits of a company, as represented by the surplus, are distributed wholly or in part as dividends. Upon the declaration of a dividend by the board of directors, mention is made on the books of the company, charging dividends declared and crediting them to a dividend payable account. This is done in order to reflect the liability of the company to its stockholders. The dividend payable account is closed out when the cash is actually paid to the stockholders in which case the dividend payable account is charged and the cash is credited.

10. *Characteristics of a dividend.*—A dividend, to be legal, must be declared by the board of directors, or issued with the consent of all the stockholders. After a dividend has been declared, and notice of the declaration has been made public, it becomes a debt of

the corporation and should appear in the balance sheet among the current liabilities.

In a large corporation, because there are a great many stockholders, a resolution of the board sometimes provides that the transfer books shall be closed at a definite date, and that they shall not be reopened until a later date specified in the resolution. The object of this is to allow the office force time to draw the dividend checks as well as to make it possible to ascertain who are the stockholders of record.

Dividends are declared as a percentage upon outstanding capital stock and each stockholder receives payment according to the amount of stock he holds. Dividends must be paid out of earned profits. It is not, however, always an easy matter to determine just what is meant by earned profits and the question has constantly been a fruitful source of litigation. The stock corporation laws of some states provide substantially that the directors of a corporation shall not pay dividends except from the surplus arising from the business of the corporation. Furthermore, they shall not divide, withdraw, or in any way pay to the stockholders, any part of the capital of the corporation or reduce the capital stock except in the manner provided by law. Where this system is in effect, heavy penalties are assessed against any director who votes for the illegal payment of a dividend as well as against any who do not definitely indicate their dissent.

11. *Considerations affecting the declaration of dividends.*—The payment of a dividend involves the distribution of liquid assets and therefore weakens the financial position of a company. Prior to the declaration and payment of the dividends, the directors will probably consider whether or not the company can safely reduce its liquid assets for this purpose. If it has adopted a policy of expansion, which involves a large increase in capital or bonded debt, or if it must soon meet a large maturing obligation, the directors will probably be conservative and withhold dividends. They will, perhaps, distribute a stock dividend thus enabling the stockholders to realize on the accrued profits by the sale of stocks so distributed.

Upon analysis it will be seen that the distribution of a stock dividend is equivalent to the sale for cash of new stock by the company and the subsequent distribution of the surplus in the form of a cash dividend.

12. *Capital expenditures charged against surplus.*—A wise financial policy will dictate a reinvestment of a portion of the surplus in fixed property. There are certain classes of equipment essential to a corporation which are proper charges to a capital account, but from these the corporation will not be able to derive additional earnings equivalent to the interest on the money invested. Such equipment should properly be financed out of surplus. The investment of surplus in fixed property prevents the sale of additional stocks or bonds. There is a consequent saving in interest charges or dividend disburse-

ments which reacts ultimately to the benefit of the stockholders. The investment of surplus in fixed property also enhances the value of the capital stock.

13. *Reserves created out of surplus.*—A corporation may set aside a portion of its surplus for the purpose of establishing a pension fund. If it does, it will be obliged to charge the surplus account and to credit a pension reserve account with the amount set aside. An equivalent amount of cash or assets might be reserved in a special fund known as the pension fund—out of which pensions could be paid to the employes of the company. Other special reserves might from time to time be created if, in the judgment of the board of directors, it were wise to do so.

14. *Reserve account misnamed.*—Attention has already been called to the fact that some reserve accounts, such as reserve for depreciation or reserve for doubtful debts, are not a part of surplus. Occasionally we find on balance sheets an account called reserve for taxes or reserve for unearned income. The former is a liability and should appear among the current liabilities, while the latter is a deferred credit to income and should not be stated with the true reserve.

15. *Illegal dividends.*—The reader has noted that dividends can be declared lawfully in the form of cash, stock or otherwise. The declaration of an illegal dividend or the payment of an illegal dividend already declared may be enjoined and stopped by proper action of the stockholders.

Illegal dividends may be of three types:

1. Those declared in disregard of the rights of some stockholders; for example, declaring dividends on common stock altho cumulative preferred dividends have not been paid.

2. Those declared in violation of the charter or by-law provisions of the particular corporation. Such a provision might state that a given amount must be accumulated in surplus before a dividend can be declared.

3. Those which either impair the capital stock or threaten the solvency of the corporation.

16. *Scrip dividends.*—Scrip dividends really partake of the nature of a forced loan. Stockholders would undoubtedly prefer to have their dividends distributed in cash, but, if the corporation issues scrip to them, they are compelled to accept it. Of course, they can realize the scrip in cash by selling it in the market, but if this is done the scrip usually sells for much less than its face value.

17. *Dividend policies.*—The wise executive attempts to forecast not only the immediate, but also the distant future. If it appears that a business will need to add to its facilities in order to take care of an increasing volume of business, the management would probably wish to withhold part of the profits from distribution. The investment of the surplus or a portion of it in fixed property will have the effect of counteracting any mistake the management may have made in charging its expenditures to capital.

Furthermore, the retention of the surplus for investment in fixed property is tantamount to charging the expenditures directly against revenue.

Whether or not all or part of the surplus should be distributed in the form of dividends will require careful consideration of many factors. Summarized they are as follows:

1. Can the business safely reduce its liquid assets by the amount necessary to pay the dividends?

2. Is the margin between selling price and cost decreasing to such an extent as to threaten the profits enjoyed in the past?

3. Have all expenditures for capital accounts been justified and have they been bona fide expenditures?

4. What is the company's credit position and its ability to raise needed sums for expansion thru the issue of capital stock or bonds?

5. Is the investment market favorable?

6. Can the profits safely stand increased fixed charges or increased amounts for dividend distribution?

REVIEW

Under what circumstances is surplus contributed directly by investors and what is the object in so doing?

How are secret reserves established and what purposes do they serve?

How is the surplus distributed to stockholders? What different forms of dividends are used?

What are the chief characteristics of a sound dividend policy?

CHAPTER XVI

SINKING FUNDS AND OTHER FUNDS

1. *The theory of the sinking fund.*—Corporate bondholders require the assurance that the amount due to them will be paid at maturity. To accomplish this, the indenture provides that a certain annual sum shall be set aside at periodic intervals, which, when invested and reinvested at an assumed rate of interest, will amount to the principal of the debt at the maturity thereof. The fund set aside is usually placed in the hands of trustees, a trust company ordinarily being designated for this purpose. Detailed provisions are made in the indenture with reference to the investment of the fund and the retirement of the debt. The phraseology used in the majority of indentures, "the sinking fund shall be set aside out of profits," necessitates a charge against revenue and a credit to a sinking fund reserve for the amount of the instalment. At the same time an equivalent amount of cash or other assets is set aside out of the general funds of the company. When the bonds mature, the sinking fund investments are converted into cash and the cash used to retire the indebtedness. The indenture frequently provides that the sinking fund shall be invested in the very bonds which are to be re-

deemed; the agreement may also stipulate the price to be paid in repurchasing the bonds. In some cases the bonds which are to be retired from the fund are drawn by lot, and cease to bear interest after the date of drawing. It will be seen, therefore, that the sinking fund reserve has simply served the purpose of withholding from stockholders a certain portion of the profits during the life of the bonds, and that after the retirement of the bonds it reverts to surplus, from which it was originally created.

2. *The sinking fund reserve a charge against profits.*—The sinking fund reserve practically operates as a depreciation reserve, by compelling the corporation to reinvest a certain portion of its profits in assets. The setting aside of the cash in the sinking fund constitutes, in its last analysis, a partial payment on the debt. The profits represented by the sinking fund reserve will ultimately find their way into fixed property investment, and thus serve to keep intact the original investment of the company. Therefore if the sinking fund reserve is large enough to take care of the accrued depreciation on physical property, the company is under no compulsion to provide in addition a reserve for depreciation. If both reserves have been created simultaneously, income has been charged twice for the same thing.

Inasmuch as depreciation is a legitimate charge against the current income account, contributions to the sinking fund reserve are a charge against income if no depreciation reserve is provided. If, however,

a depreciation reserve is also created, contributions to the sinking fund reserve should be charged against surplus, and not against current earnings. It will be seen, too, that where both kinds of reserves are created, the depreciation reserve will provide for the loss in physical assets, which are due to wear and tear, while the sinking fund reserve results in an accumulation of profits represented by assets. The assets will enable the corporation to finance the necessary replacements of its physical property out of its earnings.

It is important to note, in passing, that while both reserves may be created simultaneously, they have nothing in common, and are accumulated on different bases.

3. *Funds distinguished from reserves.*—A fund is an asset, and as its name implies, consists of an amount of cash or other assets, set aside from the general funds of the company, for a specific purpose. In contradistinction to a fund, a reserve is a credit account created by setting aside a certain portion of the profits or surplus for some specific or general purpose.

Not infrequently the reserve serves to measure the amount of its corresponding fund. Thus a sinking fund reserve might be set aside out of profits or surplus by virtue of the provisions of a mortgage indenture, and at the same time, cash or other assets equivalent to the amount of the reserve, might be set aside in the sinking fund.

An insurance reserve might be created out of revenue for the purpose of enabling a company to carry its own insurance. In this case the reserve would be created by charges to operating expenses. At the same time an insurance fund would be created so that in event of loss by fire the company would have the necessary cash, or its equivalent, to reimburse itself. If this reserve was not specifically invested in assets such as cash or securities, it might perhaps be invested in the very properties that would be destroyed by the fire. A fund, therefore, is always a debit, while the reserve is always a credit.

4. *Sinking funds proper.*—A sinking fund is an amount of cash set aside for the purpose of meeting some debt at its maturity. In the creation of a sinking fund according to scientific methods, we have a problem consisting of one unknown and two known factors. The known factors are the amount to be accumulated and the number of periods or instalments. The amount of the periodical instalment is the unknown factor and this is determined by the rate of interest which it is assumed will be earned on the fund. This is usually ascertained from compound interest tables.

When the number of periods and the rate of interest are unusual, the amount of the sinking fund contribution can be determined by the use of logarithms.

5. *The investment of the sinking fund.*—The periodical instalment set aside under the provisions

of the sinking fund agreement is usually paid over to a trustee who is charged with the duty of safely investing it. The trustee reports at regular intervals to the debtor corporation. The fund may be invested in gilt-edged securities or it may be invested in the very bonds to be redeemed, if the latter can be purchased under favorable conditions.

6. *Treatment of interest earned on the sinking fund.*—The interest earned on the sinking fund investment is a debit to the sinking fund cash account. The cash will be retained by the trustee and used in the purchase of additional bonds or for investment in other securities. The question as to the disposition of the credit of the interest earned has created some discussion. The credit may be placed in an account called "interest earned on the sinking fund" and will ultimately find its way into surplus. If a sinking fund reserve has been created, it would be better to credit the amount of the interest earned directly to the reserve account.

Some authorities hold that the interest earned may be properly credited to the interest paid on the outstanding bonds. The author does not approve of this theory because the interest earned on the sinking fund has nothing to do with the interest on the debt.

7. *Sinking fund and reserve fund investments.*—The method of treating sums set aside for sinking fund purposes in the balance sheet has already been discussed. It remains for us to consider here, the question of the valuation of securities in sinking funds

and reserve funds. Funds of this character are usually created in connection with a reserve out of current income or surplus. Thus, a sinking fund reserve might be set up out of income or out of surplus and an equivalent amount of cash set aside in the sinking fund, which would ordinarily be invested in gilt edge securities. An undertaking might set aside out of its surplus, a reserve which would control and measure the amount of cash which was set aside as a pension fund. In the same manner, an organization that decided to carry its own insurance may create an insurance reserve, by charges against income, and at the same time, set aside in an insurance fund, the amount of cash which would otherwise have been paid for insurance premiums. In other instances, however, the funds are created without setting aside a portion of the surplus to measure the amount thereof.

It is obvious, of course, that if the portion of the surplus account which has been temporarily locked up in special funds is not "ear marked," the balance standing in the surplus account is not free surplus. Ordinarily investments in special funds of this character will be carried at cost. An increase in the value of the investments is not available until the same are sold, and it is not considered desirable to reflect in the balance sheet fluctuations in the value of investments carried in permanent funds of this character. It might be well, however, to state in the balance sheet, in a parenthetical reference, the market values of investment carried in special funds. If the invest-

ments are sold and the increase in value realized, the profit will be available either for the general purposes of the organization or will be added to the funds, depending either upon the contractual obligation incurred in the creation of the fund, or in accordance with the wishes of the owners.

If the value of investments carried in special funds has decreased, the decrease should be reflected in the reserve account or in the surplus account, if it seems to be a permanent decrease, or if there is likelihood of loss being sustained on the ultimate realization of the investment. On the other hand, temporary fluctuations may be ignored.

8. *Insurance funds should be adequate to meet losses.*—In connection with insurance funds, it is necessary to see that the amount is adequate to meet the losses that might be sustained. When a corporation has a number of scattered plants, the insurance protection need not be so complete as it would have to be if the entire fixed property were located at one point. Many corporations are carrying their own insurance and if the fire hazard is negligible, this may be a profitable proceeding. Nevertheless, the creation of a reserve for insurance without the creation of an accompanying fund, which will be invested in cash deposits or securities, would be dangerous, because the reserve might be invested in the very assets which would be destroyed by a fire.

REVIEW

Explain the nature of a sinking fund and how it is operated.

Distinguish between reserves and funds.

What different methods of treating repurchased bonds may be followed in the accounts?

Describe the best methods of dealing with reserve fund investments in the accounts.

CHAPTER XVII

RELATION OF WORKING CAPITAL AND INCOME TO ASSETS

1. *Relation of net income to capital stock.*—It is a frequent custom in interpreting financial statements to consider that the ratio existing between net income and capital stock is a sure index of the progress of the business. While this ratio discloses the ability, or lack of it, on the part of a corporation to pay a dividend, many overlook the fact that capital stock does not represent the total invested assets of a business. In many cases, the earnings which a corporation discloses in its income statements, are due in no small measure to large surpluses and reserves.

Commenting upon the balance sheets of four of the large Chicago packing companies (Armour, Cudahy, Morris and Swift) a writer recently made the statement that for the year 1915 the companies had earned over 25 per cent on the total capital of $110,000,000. This statement is true, but let us analyze the situation a little further for the purpose of determining whether or not it really means anything.

The following table shows the capital stock, surplus, reserves, bonded debt and current liabilities of each organization as reported for the year 1915:

	Armour & Co.	*Cudahy Pckg. Co.*	*Morris & Co.*	*Swift & Co.*
Capital Stock	$ 20,000,000	$12,000,000	$ 3,000,000	$ 75,000,000
Surplus	98,733,117	6,050,270	29,510,270	45,850,000
Reserves	.....	.....	4,597,356	5,900,884
Total owned capital	$118,733,117	$18,050,270	$37,107,626	$126,750,884
Bonds	$ 30,000,000	$ 3,519,000	$11,300,000	$ 24,500,000
Current Liabilities	52,583,248	17,237,518	10,438,963	56,115,556
Total borrowed capital	$ 82,583,248	$20,756,518	$21,738,963	$ 80,615,556
Total combined capital	$201,316,365	$38,806,788	$58,846,589	$207,366,440

2. *Comments upon the above statement.*—It will be noted that the financial plans of each of these organizations differ widely. A comparison of the capital stock account shows that Armour and Morris have raised more capital thru the issue of bonds than thru sale of stock; Cudahy and Swift on the other hand have raised more capital thru an issue of stock than thru the issue of bonded debt. For the purpose of stating the comparison on a more uniform basis, let us consider the following statement, which shows how the capital owned and borrowed is distributed by percentage.

	Armour & Co.	*Cudahy Pckg. Co.*	*Morris & Co.*	*Swift & Co.*
Capital Stock	9.93%	30.92%	5.10%	36.17%
Surplus	49.05	15.59	50.14	22.11
Reserves	....	....	7.82	2.85
Total	58.98	46.51	63.06	61.13
Bonded debt	14.90	9.07	19.20	11.81
Current liabilities	26.12	44.42	17.74	27.06
Total	41.02	53.49	36.94	38.87
Combined Total	100.00	100.00	100.00	100.00

3. *Ratio of net income to capital stock.*—If we calculate the ratio of net income to capital stock in each of the individual companies, we learn that Armour's earnings for the year 1915 were equivalent to 55 per cent on the capital stock, while the earnings of Cudahy, Morris and Swift were respectively 6 per cent, 77 per cent and 18.8 per cent. When the financial writer made his calculations, he added the earnings of all the companies together and divided by the aggregate of the capital issues to arrive at his percentage of 25.65 per cent. Yet, when we consider the earnings of the individual companies with reference to capital stock, we see that the results differ widely and bear no relation to the average determined by the financial writer.

4. *Ratio of net income to total invested assets.*—It will be obvious that the total capital fund which each of these organizations employed in business, consists of its total assets. This is the capital fund which was turned over or employed in the business organization, and with which these organizations earned their apparently enormous profits. If we calculate the ratio of net income to total assets, we learn that in the case of Armour & Company, the ratio is 5.46 per cent; Cudahy Packing Company, 1.86 per cent; Morris & Co., 3.94 per cent.; Swift & Company, 6.83 per cent. The average for all companies combined is 5.57 per cent. For the purpose of comparison, attention is called to the following table, showing the ratio of net income to capital stock and the ratio

of net income to total assets for all the companies:

	Armour & Co.	*Cudahy Pckg. Co.*	*Morris & Co.*	*Swift & Co.*
Ratio of net income to capital stock..	55.0	6.03	77.3	18.8
	Average for all companies 25.65%			
Ratio of net income to total assets....	5.46	1.86	3.94	6.83
	Average for all companies 5.57%			

5. *Ratios based on invested assets are the proper ratios to employ.*—From a study of the foregoing figures it will be seen that comparisons on percentage bases are apt to be misleading if the proper basis is not used. It is clearly evidenced in the case of the packing companies that more significant comparison is the ratio of net income to total assets. When it is considered that the profits of Armour and Company are based on the sales turn-over of $425,000,000; that Swift and Company's business approximated $500,000,000 while that of the Cudahy Company approximated $116,000,000, the conclusion necessarily follows that the percentage of profit on sales is very small, and that an enormous turn-over is necessary to earn the profit made. Even in making comparison on this basis, which is the best one to use for comparisons of different companies, there are a number of factors which are not uniform in all cases. Comparisons would best be made for a series of years with respect to the individual companies and the progression or retrogression reflected in them noted.

6. *Relation of working capital to total assets.*—It is impossible to lay down any general rules which will aid in determining the proper relation of working capital to total assets. Perhaps the best rule is that the working capital should vary in accordance with the sales. This naturally leads to the question, "What is working capital?" Working capital is commonly understood to mean that portion of the liquid assets, free and unpledged, which a firm has available for employment in the business. In other words it is the excess of liquid assets over liquid liabilities; that portion of the liquid assets not furnished by creditors or by temporary bank loans.

Current assets are usually acquired either thru the parting with other assets or by the creation of additional floating liabilities. To ignore the floating liabilities is undesirable, because a large floating debt is usually an evidence of weakness, and always may be a source of danger. Therefore, working capital should be understood to mean the excess of quick assets over quick liabilities.

7. *Amount of working capital needed depends upon nature of business.*—Just as conditions in each kind of business differ, so the needs of individual concerns in any line of business differ also. There is no doubt but that a concern handicapped by a shortage of working capital will not operate as efficiently as one with sufficient working capital at its disposal. Without proper working capital shortage of material, long credit with consequent loss of discounts,

and many other troubles will be encountered. The shortage in working capital may result from poor managerial or financial policy, or from the distribution of too great a portion of the profit in the form of dividends. Even tho a large profit has been earned in any given year it should not be distributed in the form of cash dividends at the expense of future business needs.

For example, a comparatively young undertaking which is expanding rapidly, and which is requiring considerable working capital for the continuance and expansion of its business, must have a far larger amount of working capital than one which is progressing at a uniform rate. New business must be financed before the old business has been collected upon. A continual increase in volume of business throws a larger burden on the concern, and necessitates corresponding increases in the amount of working capital.

8. *No rule for amount of quick assets required by corporations.*—In conclusion, it may be said that there is no rule that can be laid down as to the amount of quick assets which a corporation should endeavor to acquire. In a line of business in which long credits are given to customers, it is evident that a greater amount of working capital will be needed than in those lines in which shorter credits are given. Moreover, if the terms of credit received by an undertaking are comparatively short, and the terms of credit allowed to its customers are comparatively

long, a greater amount of working capital must be provided.

9. *The economic status of contributors of capital to a business enterprise.*—Contributors of capital which is employed in a business enterprise may be divided into four classes:

Long-term creditors, such as bondholders and holders of notes having more than one year to run.

Short-term creditors whose debts are due in less than one year.

Lessors, leasing property to a firm for a term of years, at stated annual rentals.

The investors, the sole owner, the partners or the stockholders of a corporation, who have the control and management of the organization.

Creditors of the first class have usually a lien on the fixed property of the organization, and receive as compensation a stated sum which is known as interest. This class comprises those who have had sufficient confidence in the managers of the enterprise to entrust their capital to them, exacting a stated and definite rate of compensation for its use.

The second class consists of those who, as a rule, have no security for their claims, but who are still willing to advance their capital for a limited period to the managers. They may receive compensation in the way of interest or their compensation may take the form of profits realized on merchandise sold to the managers.

The third class consists of those who have had suf-

ficient confidence in the management and in the enterprise to give them title to the use of their property for a specified number of years under a lease, and who have exacted compensation or their share of the profits of the enterprise in the form of a stated annual rental.

The last class embraces those who have risked their capital in the business enterprise for the purpose of reserving to themselves all of the profits that result after their fellow-contributors in the business enterprise have been paid their stated sums.

10. *Is interest on capital part of cost of production?*—The realization of the foregoing facts in their full significance will do more than anything else to clear up the subject of charging interest on capital as a part of the cost of production. The reader will have noted in the Text on "Cost Finding" that many engineers and accountants favor the method of charging interest on capital as a part of the cost of production. The author holds that excepting for statistical purposes this practice is entirely incorrect in principle, for the following reasons:

From an economic standpoint the entire profit of a business after the first three classes of contributors to an enterprise mentioned on page 232 have been paid, is profit from business operations. The capital employed by the managers in the venture cannot earn two kinds of income, viz., interest and profit.

The charge for interest on invested capital as a part of the cost of production necessitates a bookkeeping

entry of a debit to interest expense account, and a credit to an interest earning account. These entries cancel each other in the profit and loss summary, so the net result as far as the ultimate profit is concerned is the same whether the entry has been made or not. There is this important difference, however; a fictitious entry has been made in the account for interest expenses that will never be paid in cash, and for an interest income that will never be realized in cash. Moreover, interest on capital investment, being charged as a part of the cost of production, will load the cost of production with an element of expense for which no liability has been incurred and for which a direct outlay in cash will never be required.

11. *Difficulty of selecting correct rate.*—Even if it were assumed that the principle under discussion is correct, there is still another difficulty to be confronted in selecting a rate of interest. It is just as reasonable to select four per cent as it is eight per cent, but one can readily see that the computed cost would be different in different organizations if the same rate of interest were not selected in both.

If interest is to be charged for the use of capital the time element must be considered and the charge must be made only for the exact time that the money has been employed in production. The calculations involved in this would be an almost impossible proposition from a bookkeeping standpoint.

The manner in which capital is provided cannot possibly affect the cost of production, for the methods

of financing a business have no connection, direct or indirect, with the cost of making the product.

12. *Inflation of inventory values.*—One particularly objectionable feature in charging interest as a part of the cost of production is that such a charge results in inflating inventory values. If these values are allowed to remain on the balance sheet, part of the profits will be anticipated to the extent that the inventory value includes this specific charge for interest. Therefore a concern that follows this practice commences to take its profit, weeks or months, perhaps, before the goods are offered for sale. This practice would have a tendency to imperil the credit of any concern that engages in it, because a banker who is approached for the purpose of loaning money to the concern will resent any attempt on the part of a borrower to anticipate his profits, and to inflate the borrowing value of his assets.

It is often suggested that the element of interest, included in the inventory, be deducted on the balance sheet by the creation of a suitable reserve to take care of the overvaluation. This position in itself, it would seem, ought to make clear the fallacy of the entire theory. Books of account exist for the purpose of recording what has actually taken place, and not what might have taken place under a set of hypothetical circumstances.

13. *Cost and income confused.*—Another objection to the proposal is that the charge for interest to cost of production, and a corresponding credit to an

earning account, has the effect of counting the same thing both as cost and as income. A consideration of the principles of economics will serve to clear up the erroneous reasoning indulged in by those who favor this method. There are four sources of wealth, viz., land, labor, capital variously employed, and business organization. The income derived from the four sources is known as rent, wages, interest and profit. The same capital cannot be employed to earn two kinds of income, that is, capital invested by the managers of a business enterprise cannot simultaneously earn both interest and profit. Clear reasoning becomes possible as soon as we come back to the fundamental principles of economics.

The charge for interest on invested capital as a part of the cost of production should not be confused with the charge for interest on capital which would be made in a partnership relation. In the latter instance it is made for the purpose of adjusting the inequities of capital contributed by the various partners and not included as a part of the cost.

REVIEW

Why is the ratio of net income to capital stock an inadequate test of the profitableness of an enterprise? What better test could you propose?

Who are the persons who contribute the capital to an enterprise, and what are their respective interests?

State the arguments against the point of view that the interest upon invested capital should be deemed a part of the cost of production.

CHAPTER XVIII

CONSOLIDATED BALANCE SHEETS

1. *Reasons for consolidations.*—From the Texts on "Organization and Control" and "Corporation Finance" the reader has noticed the important reasons for mergers, consolidations and amalgamations. The principal advantages claimed for these types of organization are: reduction of managerial expenses; elimination or reduction of ruinous competition; advantageous terms of financing.

According to the advantages gained the type of organization will be of one form or another.

The holding company, as already explained, was organized for the purpose of acquiring the stocks or other securities of affiliated companies, thus effecting a combination which would bear the test of legal scrutiny. The earlier pools and so called trusts did not accomplish this result to the satisfaction of big industrial enterprises.

Under the newer form of consolidation each company not only retained its corporate entity, but also in the eyes of the law, remained a separate corporation. Nevertheless, the virtual consolidation of ownership was beyond question. Such being the case, the results of this ownership can only be prop-

erly expressed in a statement of their accounts by consolidating the balance sheets of the "unit" companies into one balance sheet. If that is not done the balance sheet of the holding company would not furnish the owners of the corporation with the information about its financial position to which they are justly entitled.

A consolidated balance sheet, therefore, is intended to reveal the financial position of the whole group of affiliated companies, considered as one enterprise.

2. *Possible legal basis for consolidated statements.* —In discussing the consolidated income account, attention was called to the fact that there was no legal basis for the preparation of such a statement, unless it is the theory of a true valuation of assets. It is evident that changes in the conditions of the assets and liabilities of a holding company are due in part, at least, to the results of operations of the subsidiaries. The increase in the surplus accounts of subsidiaries, unreduced by dividends, enhances the value of the stock which the holding company owns.

While it is not a desirable practice to write up all assets simply because they have appreciated in value, yet it is a common practice to reflect in financial statements all changes that have resulted directly from trading operations. On the theory, therefore, that the financial statements of a holding company should reflect such increases in value of its investments, we may eventually require by law, consolidated statements which will show the exact condition of affairs

for the group as a whole. Appreciations in value other than those resulting from trading or manufacturing operations would, of course, be omitted.

3. *Investments carrying less than control.*—As a stockholder, the investing corporation has an undivided interest in the assets of the sub-companies to the extent of its holdings of stock, and it is desirable to show the value of this investment at its actual worth instead of at its cost to the purchasing company. We have our choice of recording such investments, by either of the following methods.

4. *Carrying at cost.*—The first method is that of carrying the investment at its original cost to the purchaser. This plan has much to commend it from the conservative standpoint. This is especially true, if care is taken to write down the asset when its value has depreciated. The main objection to such a procedure, however, is that cost and value do not remain constant for any length of time.

5. *Periodic revaluation.*—This brings us to the question of whether or not a periodic revaluation of the investment is possible. While this might be the most satisfactory solution under theoretical conditions, it will not be found to work out satisfactorily in practice, because accuracy in the revaluation is impossible. There is no true basis on which a revaluation can be made other than the actual physical inventory or market price of the stock. The market price is dependent upon many outside factors, while the actual revaluation is sometimes physically impos-

sible. At best, actual revaluation would simply be the opinion of men who might or might not be qualified to make the revaluation.

6. *The equity in surplus.*—It is sometimes customary to carry the increase in surplus directly into the investing company's surplus account, rather than to set it up under a separate heading. In such a case, dividends declared from the combined surplus should be based upon the amount of current receivables included in the current assets of the sub-company. The practice is not to be recommended, however, unless the investing company is certain that it will soon realize on a portion of its share of the other company's surplus. While the investing company has set up in its balance sheet a current asset representing its interest in the other company, there is ordinarily no positive means of telling whether this current asset will be realized upon.

A dangerous situation may result from this practice, if dividends have been paid by the investing company out of its equity in the net assets or surplus of the other corporation. If some catastrophe overtakes the sub-company and wipes out this surplus, the directors of the investing company would probably be found guilty of paying dividends out of capital. Therefore, great discretion must be exercised by directors in handling these accounts after they have been set up on the books.

7. *Treatment of dividends.*—Dividends received on such an investment should be credited to the in-

vestment instead of being treated as current earnings. This statement hardly requires an explanation because it is evident that we have already taken credit for the earnings when the asset was appreciated and the surplus account set up.

If a separate surplus account is carried, then the amount of the dividends received must be also transferred from this special surplus account to the free surplus of the receiving company.

8. *Objection to carrying the investment at cost.*—It is also evident that the practice of carrying the investment previously described, at cost in the books of the holding company has another disadvantage. The balance sheet of the holding company will, of course, disclose how much of its capital has been invested in this sub-company. But the earning account of the holding company may not disclose the entire earnings of that capital. Thus, if the sub-company did not distribute any of its accumulated surplus in the form of dividends, failure to record the effect of this appreciation in the value of the sub-company's stock, due to the increased surplus, would also result in an understatement of the true earnings of the holding company.

9. *Revaluation of investments is subject to complications.*—When a holding company has paid for stock of subsidiaries considerably more than the book value, complications often arise. Moreover, the stock or the bonds of the holding company may have been issued in payment for the securities of the sub-

sidiary company which is acquired. The question then raised would be whether or not the directors in reappraising the value of the securities originally acquired, perhaps at a liberal price, should add to the cost thereof by means of an equity account, the pro-rata share of the undistributed earnings of the subsidiary, subsequent to the date of the acquirement of the securities by the holding company. While the valuation placed upon the stock of the sub-company acquired originally by the directors would probably never be questioned, the directors might have difficulty in proving that they were justified in creating a surplus, and in distributing a dividend out of it, when such surplus was created thru their own reappraisal of the securities.

10. *Oppressive tactics to discourage minority interests.*—It very often happens that the sub-company has received large cash advances from the holding company. The subsidiary company, having increased its earnings and its surplus, would probably be in a position to distribute a reasonable dividend. Assuming that the holding company is desirous of practising oppressive tactics to the disadvantage of minority stockholders and suddenly withdraws its advances from the sub-company it thereby reduces the sub-company's cash and working capital and effectually prevents it from declaring a dividend, even tho it has earned profits. The holding company, in recovering its cash, has practically enjoyed the receipt of a divi-

dend. This form of oppression has often been employed.

As already pointed out the failure to incorporate in the accounts of the holding company the presence of this surplus results in the creation of a secret reserve. This is an additional disadvantage to that resulting from the fact that equalization of the income of the holding company from one period to another is not provided for by this method.

It is obvious that an equitable method of preparing consolidated statements should be employed. The main thing to bear in mind here is the elimination of all inter-company transactions by the offsetting of the debit items of one company by the corresponding credit items of an affiliated company. This applies, of course, only to such items as represent actual transactions or relations between the associated companies.

11. *Illustration.*—On pages 247 and 248 will be found an example of the method of preparing a comparatively simple consolidated balance sheet. Considering the items on this statement in detail, it will be noted that the "A" company held $81,000 in bonds issued by the "B" Company, and that "C" Company held $119,000 of the same bonds. As the liability of the "B" Company is offset by an asset of the same item on the books of "A" and "C" Companies, the consolidated balance sheet need not show either the asset or the liability. Consequently, we eliminate

$200,000 from our total assets and $200,000 from our total liabilities. In this same way, the advances to and from affiliated companies, dividends receivable or payable among the affiliated companies, and accrued interest on the bonds, together with demand notes, are set against the corresponding accounts of affiliated companies. A statement results which shows only the relation of the combined group to its stockholders and to the public.

If the "B" Company, for example, were in poor financial condition, or had suffered heavy losses from operation during the year, this condition would be reflected in the combined balance sheet in so far as it affected the standing of the group and that, after all, is the information which an investor or stockholder wishes to have.

THE "A" COMPANY

Balance Sheet as at.....191..

Fixed Assets		
Land and Buildings	$294,000.00	
Machinery and Equipment	178,600.00	
Investment in Bonds of Company "B"	81,000.00	
Outside Stock Investments	200,000.00	$ 753,600.00
Working and Trading Assets		
Materials and Supplies	$ 46,140.00	
Goods in Process	48,274.00	
Finished Goods	60,800.00	155,214.00
Current Assets		
Cash	$ 73,510.00	
Accounts Receivable	47,100.00	
Demand Notes Company "B"	45,000.00	
Accrued Interest Receivable	1,032.75	166,642.75
Total Assets		$1,075,456.75

Capital Liabilities		
Common Capital Stock Issued and Outstanding (Authorized $1,000,000)	$600,000.00	
Preferred Capital Stock Issued and Outstanding (Authorized $1,000,000)	100,000.00	$ 700,000.00
Current Liabilities		
Loans Payable	$ 36,000.00	
Advances by Company "C"	60,000.00	
Vouchers and Accounts Payable	58,120.00	
Dividends Payable	100,000.00	254,120.00
Reserves		
For Depreciation	$ 34,900.00	
For Doubtful Accounts Receivable	5,000.00	
For Contingencies	36,000.00	75,900.00
Profit and Loss Surplus		45,436.75
Total Capital, Liabilities, Reserves and Surplus		$1,075,456.75

THE "B" COMPANY

Balance Sheet as at.....191..

Fixed Assets		
Land and Buildings	$495,000.00	
Machinery and Equipment	594,800.00	
Outside Stock Investments	150,000.00	$1,239,800.00
Working and Trading Assets		
Materials and Supplies	$ 56,250.00	
Goods in Process	50,600.00	
Finished Goods	75,460.00	182,310.00
Current Assets		
Cash	$122,564.76	
Accounts Receivable	92,460.00	215,024.76
Total Assets		$1,637,134.76
Capital Liabilities		
Common Capital Stock Issued and Outstanding (Authorized $1,000,000)	$1,000,000.00	
First Mortgage Bonds 6%, 1925—J. & J.....	300,000.00	
		$1,300,000.00

Current Liabilities		
Demand Notes Payable	$ 45,000.00	
Loans Payable	50,000.00	
Advanced by Company "C"	60,000.00	
Vouchers and Accounts Payable	28,865.00	
Dividends Payable	25,000.00	
Accrued Interest on Bond	3,825.00	212,690.00
Reserves		
For Depreciation	$ 60,500.00	
For Doubtful Accounts	4,500.00	65,000.00
Profit and Loss Surplus		59,444.76
Total Capital, Liabilities, Reserves and Surplus		$1,637,134.76

THE "C" COMPANY

Balance Sheet as at.....191..

Fixed Assets		
Stock Investments	$2,217,600.00	
10,000 Shares Common Stock "B" Co.		
6,000 Shares Common Stock "A" Co.		
1,000 Shares Preferred Stock "A" Co.		
Bonds of "B" Company 6%, 1925 J. & J.	119,000.00	$2,336,600.00
Current Assets		
Cash	$ 941,882.75	
Advances to Subsidiaries	120,000.00	
Dividends Receivable	125,000.00	
Accrued Interest Receivable	1,517.25	1,188,400.00
Total Assets		$3,525,000.00
Capital Liabilities		
Common Capital Stock Issued and Outstanding (Authorized $3,000,000)	$2,000,000.00	
Preferred Capital Stock Issued and Outstanding (Authorized $2,000,000)	1,400,000.00	$3,400,000.00
Profit and Loss Surplus		125,000.00
Total Capital and Surplus		$3,525,000.00

WORKING PAPER

Consolidated Balance Sheet of the A, B, and C Companies as at .....191..

	"A" Company	*"B" Company*	*"C" Company*	*Eliminations*	*Consolidated Balance Sheet*
Fixed Assets					
Land and Buildings	$ 294,000.00	$ 495,000.00	$	$	$ 789,000.00
Machinery and Equipment	178,600.00	594,800.00	.....	.....	773,400.00
Outside Stock Investments	200,000.00	150,000.00	.....	.....	350,000.00
Bonds of Affiliated Companies	81,000.00	.....	119,000.00	200,000.00	.....
Stock of Affiliated Companies	.....	.....	2,217,600.00	2,217,600.00	.....
Premium Paid on Investments in Affiliated Companies	.....	.....	.....	517,600.00	517,600.00
	$ 753,600.00	$1,239,800.00	$2,336,600.00	$1,900,000.00	$2,430,000.00
Working and Trading Assets					
Materials and Supplies	$ 46,140.00	$ 56,250.00	$	$	$ 102,390.00
Goods in Process	48,274.00	50,600.00	.....	.....	98,874.00
Finished Goods	60,800.00	75,460.00	.....	.....	136,260.00
	$ 155,214.00	$ 182,310.00	$	$	$ 337,524.00
Current Assets					
Cash	$ 73,510.00	$ 122,564.76	$ 941,882.75	$	$1,137,957.51
Advances to Subsidiaries	.....	.....	120,000.00	120,000.00	.....
Dividends Receivable	.....	.....	125,000.00	125,000.00	.....
Accrued Interest Receivable	1,032.75	.....	1,517.25	2,550.00	.....
Accounts Receivable	47,100.00	92,460.00	.....	.....	139,560.00
Demand Notes of Affiliated Companies	45,000.00	.....	.....	45,000.00	.....
	$ 166,642.75	$ 215,024.76	$1,188,400.00	$ 292,550.00	$1,277,517.51
Total Assets	$1,075,456.75	$1,637,134.76	$3,525,000.00	$2,192,550.00	$4,045,041.51

Consolidated Balance Sheet—Continued

	"A" Company	*"B" Company*	*"C" Company*	*Eliminations*	*Consolidated Balance Sheet*
Capital Liabilities					
Common Capital Stock Outstanding	$ 600,000.00	$1,000,000.00	$2,000,000.00	$1,600,000.00	$2,000,000.00
Preferred Capital Stock Outstanding	100,000.00	.....	1,400,000.00	100,000.00	1,400,000.00
First Mortgage Bonds	.....	300,000.00	.....	200,000.00	100,000.00
	$ 700,000.00	$1,300,000.00	$3,400,000.00	$1,900,000.00	$3,500,000.00
Current Liabilities					
Demand Notes Payable	$	$ 45,000.00	$	$ 45,000.00	$ .....
Loans Payable	36,000.00	50,000.00	.....	.....	86,000.00
Advance by Affiliated Companies	60,000.00	60,000.00	.....	120,000.00	.....
Vouchers and Accounts Payable	58,120.00	28,865.00	.....	.....	86,985.00
Dividends Payable	100,000.00	25,000.00	.....	125,000.00	.....
Accrued Interest Payable	.....	3,825.00	.....	2,550.00	1,275.00
	$ 254,120.00	$ 212,690.00	$	$ 292,550.00	$ 174,260.00
Reserves					
For Depreciation	$ 34,900.00	$ 60,500.00	$	$	$ 95,400.00
For Doubtful Accounts	5,000.00	4,500.00	.....	.....	9,500.00
For Contingencies	36,000.00	.....	.....	.....	36,000.00
	$ 75,900.00	$ 65,000.00	$	$	$ 140,900.00
Profit and Loss Surplus	$ 45,436.75	$ 59,444.76	$ 125,000.00	$	$ 229,881.51
Total Capital, Liabilities, Reserves and Surplus	$1,075,456.75	$1,637,134.76	$3,525,000.00	$2,192,550.00	$4,045,041.51

REVIEW

What different methods may the holding company pursue in valuing stock held in subsidiaries?

Under what conditions should dividends on the stock of subsidiaries not be credited to income of parent company?

How can a holding company pursue oppressive tactics to discourage minority interests?

CHAPTER XIX

CONSOLIDATED BALANCE SHEETS (Continued)

1. *Premium on Investments.*—The amount paid for stock purchased, presumably represents the intrinsic value of that stock to the purchaser; unless the stock was taken over at its par value at the time that the concern was organized, it is unlikely that it would be subsequently acquired at that valuation. As already illustrated, the par value of the stock can be eliminated from both sides of the consolidated balance sheet by taking the par value as shown by the books of the issuing company and eliminating that amount from the assets held by the purchasing company, and from the combined capital stock outstanding.

The excess above par, paid by the purchasing company is nothing more than the amount paid by it for the good-will and accumulated surplus of the issuing company. It is customary to carry this item under a separate heading termed "Good-will" or, better, "Premium on Investments in Affiliated Companies." The asset then stands on the books at its net cost and under a heading which clearly denotes its peculiar nature. In the example on pages 247 and 248, the reader will have noted that while the "C" Company

carried stocks on its books at a valuation of $2,217,-600.00, this item was offset by a credit on the books of the subsidiary companies amounting to only $1,-700,000.00. The difference of $517,600.00 can be treated upon the consolidated balance sheet as good-will. Premiums paid for bonds (*in affiliated companies only*) would be handled in the same manner. The same method is applied to stocks and bonds of a subsidiary company, acquired by another subsidiary.

2. *Other methods of carrying premium on investments.*—The management might not desire to carry this intangible asset in the consolidated balance sheet. In this event it would be entirely legitimate to offset this item of premium on investments against the combined surplus. For instance, as has already been indicated, the net worth of a corporation is its capital and surplus. If the entire stock of that corporation is purchased at its book valuation, the premium paid for the stock purchased equals in effect, exactly the amount of its surplus at the time of the purchase. In the consolidated balance sheet, the items of premium and purchased surplus exactly offset each other. However, this ideal situation does not often occur. Purchases of securities, especially if they are paid for in the stock of the purchasing corporation, are nearly always bought on a very liberal basis. Something is paid for the intangible asset, good-will of the selling company, in addition to the book value of the net assets.

If, under these circumstances, we attempted to

offset the premium against the combined surplus, we would wipe out the entire surplus of the subsidiary company and still not dispose of the amount paid for the good-will. This method is, however, seldom resorted to.

The item, good-will, included in the consolidated balance sheet will, therefore, represent not only the good-will shown on the books of the subsidiary company, but in addition, the amount paid by the holding company, either in cash or in securities, for the good-will of the selling company, represented by the difference between the cash or par value of the securities paid and the book value of the securities received in exchange.

3. *Discounts on investments.*—A similar situation but with opposite results, exists when the stock of an affiliated company is purchased at a discount. A special surplus results equal to the amount of this discount. It is seldom either proper or desirable, however, to carry this item in the surplus account as free surplus. It is considered better to offset the amount of such a surplus against the good-will asset appearing in the consolidated balance sheet.

If there were several corporations involved in the consolidation, and some stock is purchased at a premium and some at a discount, it is better to set the discount against the premium, carrying only the net premium paid into the consolidated balance sheet. If the stock of one of the subsidiaries has been purchased at a discount, it is evident that this particular

company was not in so prosperous a condition as the others. When the consolidation took place, the different companies became, in effect, one organization and the value of one is affected by the value of the other. Therefore, the good-will of the combined organization is diminished by the amount of the depreciated value of the less prosperous corporation.

If, however, this stock was purchased at a discount as a result of outside factors and its actual value was par or higher, then the increment undoubtedly belongs in the surplus account. As a rule, this surplus resulting from stock purchased at a discount would have to be applied against the deficit in the account of the subsidiary, if a deficit exists, which is quite probable, or the purchase of the stock could not have been made at a discount. If a deficit does not exist, then it is important to be sure that some of the assets have not been over-valued thru failure to make adequate provision for depreciation.

4. *Treatment of deficits existing in sub-companies.* —In cases where a holding company purchases stock of a company whose balance sheet shows a deficit from operation, the value of the capital stock of the subsidiary company would probably be reduced to make up for the deficit. While the deficit is, in effect, absorbed at the time of the purchase, any subsequent dividends by that corporation cannot legally be distributed as dividends until the deficit has been made up. Therefore, while in the consolidated balance sheet the entire group must make up for the deficit

of one company, the law will not permit the subsidiary company to pay dividends until it has made up its own deficit.

5. *Protection of minority interests.*—Where a minority stock interest exists, the minority stockholders have a right to their share of the profits made on inter-company transactions. Consequently, it is legitimate and necessary for the consolidated statements to show as an asset the proportion of inter-company profits on construction, prepaid expenses, inventories and the like, which will accrue to the minority stockholders of the subsidiary company. The proportion of the surplus of the subsidiary company belonging to the minority stockholders may be set up in the balance sheet under a special heading, "Equity of Minority Stockholders of ..... Company."

6. *Capitalized surplus.*—In dealing with the question of surplus, it was pointed out that if dividends can be paid out of the surplus of a subsidiary company without reducing the surplus below the amount that existed at the time of consolidation, such dividends constitute income to the holding company. Also, when the dividend reduces the amount of the capitalized surplus, the reduction is treated as a return of the investment on the books of the holding company. The capitalized surplus then becomes a new figure, changed by the amount of its reduction, and should be considered as a new amount in all subsequent statements or calculations.

From this, it is aparent that a holding company

may have four kinds of surplus: free, capitalized, minority equity and appropriated.

7. *Method of treating surplus accounts of acquired companies.*—The above topics very naturally bring up the question of recording these transactions. No difficulty arises when all the stock of the subsidiary is owned by the holding company, and when the directors of the holding company are also the directors of the subsidiary company, or at least control the board. They may direct that the surplus of the subsidiary company at the date of the purchase be set aside, and appropriately designated on its own books. The title of the account will then tell exactly the nature of its contents.

When purchases of the stock of the subsidiary are, however, made at various times, it is seldom possible to set aside each portion of the capitalized surplus on the books of the subsidiary company, because the control of the sub-company may not be obtained immediately. Again, the rights of the minority stockholders enter and prohibit the splitting of the surplus account under such conditions. But, in the consolidated statement, it will be necessary in every case to indicate the various additions to the capitalized surplus. Each new purchase of stock by the holding company carries with it a proportion of the surplus existing at the date the purchase price was agreed upon, thus increasing the item of capitalized surplus of the consolidated company.

8. *Other phases of capitalized surplus.*—The same

principle of indicating additions to the capitalized surplus holds good, even tho the purchase was not based directly upon the book value of the stock of the subsidiary company. The holding company capitalizes the condition of the subsidiary at the time it makes the purchases. Dividends out of the surplus existing at the time of the purchase are nothing more than a partial liquidation of its investment. It should be noted also that the date of purchase means either the date at which the purchase price was agreed upon, or the date of the financial condition forming the basis of the purchase price. Earnings subsequent to that date, even tho the entire sales contract in reference to stock has not been completed, may properly be treated as income accruing to the holding company when such earnings are paid to it in the form of dividends.

No great difficulty has been confronted thus far, but it is not so simple to handle such transactions when the stock is not purchased at one time, and when control is secured by various purchases made at different times. The basis for these purchases may be the stock market valuation of the stock in question. However, the same principles are involved, and the portion of the surplus accruing to each separate purchase becomes an asset of the holding company and must be capitalized on its books, and in the consolidated statement. Any dividends received out of these separate items of capitalized surplus become a return or liquidation of the investment.

When the relation between the amounts of "capital-

ized surplus" and the corresponding asset of "premium on investments of subsidiaries" is favorable, it is advisable to set the capitalized surplus aside under a separate heading. More frequently, it must be admitted, the premium is far in excess of the surplus at the time of purchase. The better showing will then be made if only one surplus account is carried.

When stock in a subsidiary company is purchased, the surplus of that company as of the date of purchase becomes capitalized by this purchase. Any dividends declared and paid by the subsidiary company out of this surplus may not be treated as income to the holding company, but rather as a reduction in the value of the assets, and must be treated accordingly. Perhaps this statement can be made clearer if we consider the theoretical situation of a holding company purchasing stock in a subsidiary company by giving its own stock in exchange. The exchange is made upon the basis of the par value of the stock and the surplus of the subsidiary company as of the date of purchase. This results in the surplus of the subsidiary company being capitalized on the books of the holding company.

9. *Illustration of capitalized surplus.*—The stock and surplus of the subsidiary company measure the net assets of that company. The holding company purchases the stock at book value issuing its own stock at par in payment. If the subsidiary company declares a dividend out of the surplus capitalized, the payment of this dividend decreases the amount of its

net assets, and in turn decreases the equity of the holding company in those net assets. Therefore, such dividends received by the holding company, constitute a decrease in the value of its investment in the subsidiary, and are not income in any sense of the word. They should be credited to the investment account on the books of the holding company.

10. *Unpaid cumulative dividends of subsidiaries.*—In preparing the balance sheet of a holding company, there are several items which will require slightly different treatment from that ordinarily accorded to them. Thus, it is customary to show as a direct liability of a business organization, the liability for unpaid cumulative dividends. As dividends are not a liability until they have been declared by the board of directors, a corporation that has unpaid cumulative preferred stock dividends, need not show such liability directly, except as a footnote in the balance sheet. Cumulative unpaid preferred stock dividends of subsidiaries should be similarly shown in a consolidated balance sheet.

11. *When control is not complete.*—If the holding company, or its subsidiary, purchases material from an affiliated company in which the stock control is not complete, the usual procedure is varied slightly. More extensive records are necessary to protect the rights of the minority stockholders in the vending corporation. Consequently, the initial transaction is carried on at cost, plus the customary profit. On the books of the purchasing company, the proportion of

inter-company profit is charged back from the asset or purchasing account to a separate account, in which it is considered as a charge against any dividend from such earnings that may be received from the vendor subsidiary. All dividends received out of inter-company profits must be credited to this charge. These charges and credits must pass thru the books of the holding company. All companies which are associated must have the same accounting system, the same accounts and a common fiscal year. As was previously indicated, the inter-company profits may only be eliminated from the surplus and asset accounts in the balance sheet.

In any event, however, the books of each company must be sufficiently detailed to show cost and profit on each sale. This information must be passed on to the purchaser so that he may know the amount of inter-company profit occurring with each inter-company transaction. These purchases, however, will be taken on the books at full cost, including the vendor's profit, if any is charged. All inter-company transactions must be recorded separately from similar transactions made with outsiders.

While consolidated statements, as just described, give a fair and equitable picture of the condition of the group as a whole, they do not show the status of the individual companies. For example, the classes of obligations are not shown in detail. Many additional details will often be desired by the management, stockholders, investors or creditors of the hold-

ing company or its subsidiaries. In fact, the consolidated statement is open to the same objections that apply to any other condensed financial statement.

12. *Overcoming disadvantages of consolidated statements.*—The disadvantages of consolidated statements may be overcome by making schedules detailing the kinds of assets and liabilities a part of the consolidated statement. The same purpose would be answered by the current publication of the detailed statements of each subsidiary company. Or, when the number of companies involved is not too great, the consolidated statement itself may be made up in the form of the working sheet, illustrated on pages 247 and 248. This working sheet shows the detailed account of each subsidiary company, and the consolidation statement for all. In the published statements, the column headed "Eliminations," would, of course, be omitted.

13. *Interpretation of consolidated statements.*—In general, the interpretation of consolidated statements is subject to the same rules as the interpretation of any other financial statement of a single company. There are, however, several points peculiar to this type of statement, which require special mention. As we have seen, the method of interpreting financial statements depends upon the purpose for which the information is to be used. There is probably no better way of discussing the points of particular interest in reading consolidated statements than to approach the topic from the three angles of

efficiency of operation and management, credit risk and investment standpoint.

In a consideration of the first viewpoint, it is apparent that consolidated statements will be of most value if used in conjunction with detailed statements. Whoever analyzes the statements with the idea of measuring the efficiency of operation and management will be interested in the separate results of individual companies and departments, as well as in the progress of the company as a whole.

With this end in view he will find that comparative consolidated balance sheets and income statements will show the changes in financial condition and the increase or decrease in total earnings. The details of the individual company statements will explain the fluctuations in the combined statement. If the holding company group has been but recently organized, a comparison of the consolidated income statement with a consolidation of the individual income statements, prior to combination, will show at a glance whether or not the expected economies of consolidation have resulted.

Also, when new corporations have been absorbed in the interim between statement periods, a check on the wisdom of such a step may be had if the condition and profits of that company, both before and after consolidation, are compared. The stockholder will use this information to control his board of directors and to guide him at the annual election.

14. *Value of individual statements to managing*

officials.—An executive officer, or any one else, using these statements as a guide to operation and management, would first examine the progress of the group as shown by the comparative consolidated statement. Any unusual changes would be traced back to their sources in the individual company. Financial conditions would be analyzed, changes investigated and the effect of past policies noted with a view of avoiding what was unsatisfactory.

15. *Credit risk viewpoint.*—The banker or trade creditor, on the other hand, has little interest in the individual statements. He would use them only in tracing down the unfavorable conditions and estimating the probable future effects of individual companies on the group. He is, however, vitally interested in the efficiency of the management and, to this extent, he must estimate how much the future financial condition will be improved or weakened by the actions of the management. For this purpose, he must use comparative consolidated statements and comparative individual statements. His attention, then, is chiefly devoted to the present relation between current receivables and current payables, and the expected changes which will result from the introduction of new factors and from an alteration of the policies of the management. He looks at the statement, however, solely to determine group conditions.

16. *Investment standpoint.*—The investor's purpose in examining the statements of a holding company, is first to determine the security of his invest-

ment. It must be assumed that all investments are to be made in the stocks and bonds of the holding company. If investment in a subsidiary were to be considered, the subsidiary's condition must be viewed in the light of its relations to the group. A minority investment under such conditions is to be avoided, as a stockholder has no certainty that the holding company will not manipulate the subsidiary for its own individual gain.

An investor in a holding company will also verify the valuation of the fixed assets. As the valuation of good-will is dependent in part upon the economics of consolidation, he will make the same comparison as was described in a preceding chapter. He will closely scrutinize the values of all fixed assets, both before and after the combination has been effected. The stability of earnings and estimates for the future will be disclosed by the comparative income statement. The individual and supplementary statements will only be used by him to elaborate and to explain the consolidated statement. Furthermore, he must decide upon the effect that managerial policies will have on his investment, and for that purpose he will study the individual statements.

17. *Other forms of consolidated statements.*— While the method just described is the best, it is not the only one employed for consolidated statements. We have already seen that if a true statement of facts is presented—the object of any and all financial statements—the form matters little. If all the required information can be obtained, the method of presenting it need be considered

only in so far as it affects the ease with which such information is obtainable. Sometimes individual balance sheets, with explanatory schedules of all outside items represented by the accounts "investment in subsidiaries" and "advances to or from subsidiaries," will give all the information desired. In such a case, the balance sheet of the holding company will be presented in its customary form, while separate listings of assets and liabilities and sources of income and expenditure, will be presented in separate schedules, grouped according to companies. If the amount of detail involved and the number of companies considered is not excessive, this form of statement will sometimes serve every purpose.

As already mentioned, separate and complete statements may be issued for every company. The holding company statement, together with the financial statement for each of the subsidiaries, would constitute a complete record of the operations of the holding company. Such a procedure does not give the kind of information usually desired with that degree of clearness with which it is obtained thru the use of the consolidated balance sheet or by a separate listing of the inter-company items. However, if the whole organization is small and the number of constituents is few, it may sometimes be satisfactory.

It would, of course, be absurd to prepare a consolidated balance sheet, or a consolidation of accounts of companies totally dissimilar. Thus, if holding company "A," owns the entire stock of corporation "B,"

a company engaged in manufacturing gas and electricity, and also the entire stock of corporation "C," which operates a manufacturing plant, a consolidation of the assets and liabilities of the underlying companies in this event, would be meaningless, if not positively misleading.

The following illustration shows a consolidated income and profit and loss statement as well as a consolidated general balance sheet properly certified.

HASKINS & SELLS
CERTIFIED PUBLIC ACCOUNTANTS
30 Broad Street
NEW YORK

CHICAGO Harris Trust Building	LONDON, E. C. 30 Coleman Street	SAN FRANCISCO Crocker Building
CLEVELAND Williamson Building	ST. LOUIS Third National Bank Building	BALTIMORE Equitable Building

PITTSBURGH
Farmers Bank Building
Cable Address "Hasksells"

CERTIFICATE

We have audited the general books and accounts of the AMERICAN SMELTING & REFINING COMPANY and the AMERICAN SMELTERS SECURITIES COMPANY for the year ended December 31, 1912, against the related records of original entry and supporting documents, including monthly reports regularly received from their various plants and mines, and

WE HEREBY CERTIFY, that, in our opinion, the accompanying General Balance Sheet and Summary of Income and Profit & Loss correctly exhibit, respectively, the consolidated financial condition of the Companies at December 31, 1912, and their consolidated results for the year.

(Signed) HASKINS & SELLS,
Certified Public Accountants.

New York, March 5, 1913.

Fourteenth Annual Report

AMERICAN SMELTING & REFINING COMPANY
AND
AMERICAN SMELTERS SECURITIES COMPANY

Consolidated General Balance Sheet

ASSETS

	Dec. 31, 1912	Dec. 31, 1911	Increase
Property Account: Cost of Plants, Properties of Subsidiary Companies and Additions and Improvements Less Depreciation and Additions and Improvements Written off to Profit and Loss	$140,063,527.81	$139,963,733.15	$ 99,794.66
Investments in Securities of Other Companies	$ 1,010,537.63	$ 1,585,670.35	$ 575,132.72 [3]
Metal Stocks:			
Ore, Bullion and Factory Product on Hand and in Transit [1]	$ 36,141,012.77	$ 32,473,186.24	
Less Unearned Treatment Charges	6,479,994.18	5,980,205.54	
Remainder	$ 29,661,018.59	$ 26,492,980.70	$3,168,037.89
Working Assets:			
Material and Supplies	$ 2,783,113.79	$ 2,566,872.59	
Prepaid Taxes and Insurance and Suspended Debtor Accounts.	327,184.67	400,148.70	
Total Working Assets	$ 3,110,298.46	$ 2,967,021.29	$ 143,277.17

Current Assets:			
Cash on Hand and in Transit	$ 3,809,373.52	$ 5,890,707.63	
Demand Loans [2]	5,935,873.75	3,192,049.59	
Advances to Affiliated Companies	349,744.36	333,704.91	
Accounts and Notes Receivable	4,387,563.35	4,236,518.75	
Total Current Assets	$ 14,482,554.98	$ 13,652,980.88	$ 829,574.10
Cash and Securities in Funds:			
Cash with Trustees of Sinking Fund—American Smelters Securities Company 6% 15-year Gold Bonds	$ 896.50		
Insurance Fund	228,704.84	232,554.84	
Total Cash and Securities in Funds	$ 229,601.34	$ 232,554.84	$ 2,953.50 [3]
Unextinguished Discount on Bonds	$ 654,166.66	$ 704,166.66	$ 50,000.00 [3]
	$189,211,705.47	$185,599,107.87	$3,612,597.60

[1] Does not include metals purchased and on hand of the approximate value of $14,963,528.04; payment for which is to be made in refined metals and not in cash.

[2] $2,500,000.00 secured by approved Stock Exchange Collateral and the balance by copper in process of refining.

[3] Decrease.

Consolidated General Balance Sheet

LIABILITIES

	Dec. 31, 1912	Dec. 31, 1911	Increase
Preferred Capital Stock Outstanding:			
American Smelting & Refining Co	$ 50,000,000.00	$ 50,000,000.00	
American Smelters Securities Co.			
Series "A"	17,000,000.00	17,000,000.00	
Series "B"	30,000,000.00	30,000,000.00	
Total Preferred Capital Stock	$ 97,000,000.00	$ 97,000,000.00	
Common Capital Stock Outstanding:			
American Smelting & Refining Co	$ 50,000,000.00	$ 50,000,000.00	
Debenture Bonds Outstanding:			
American Smelters Securities Co	$ 15,000,000.00	$ 15,000,000.00	
Less Par Value of Bonds held by Trustee in Sinking Fund	505,000.00		
Remainder	$ 14,495,000.00	$ 15,000,000.00	$ 505,000.00 1
Current Liabilities:			
Accounts, Drafts and Wages Payable	$ 6,773,296.82	$ 5,165,064.98	
Deferred Payments on Mining Properties	440,000.00	550,000.00	

Interest on Debenture Bonds:			
Unclaimed	$ 37,605.00	$ 4,125.00	
Accrued, not due	375,000.00	375,000.00	
Dividends:			
Unclaimed	44,271.83	15,760.00	
Payable after December 31, 1912	1,873,105.00	2,501,666.67	
Accrued Taxes	244,809.23	198,493.25	
Total Current Liabilities	$ 9,788,087.88	$ 8,810,109.90	$ 977,977.98
Reserve and Suspended Creditor Accounts:			
Employes' Benefit Pension Reserve	$ 500,000.00	$ 394,435.51	
Fire Insurance Reserve	327,500.00	335,948.03	
Miscellaneous	341,715.50	358,888.12	
Total Reserve and Suspended Creditor Accounts	$ 1,169,215.50	$ 1,089,271.66	$ 79,943.84
Profit and Loss Surplus	16,759,402.09	13,699,726.31	3,059,675.78
	$189,211,705.47	$185,599,107.87	$3,612,597.60

1 Decrease.

Fourteenth Annual Report

AMERICAN SMELTING & REFINING COMPANY

AND

AMERICAN SMELTERS SECURITIES COMPANY

Summary of Consolidated Income and Profit and Loss

	Year ended Dec. 31, 1912	Year ended Dec. 31, 1911	Increase
Net Earnings of Smelting and Refining Plants and Industries Immediately Dependent Thereon:			
Amount before deducting Repairs and Replacements	$ 15,016,135.40	$ 14,045,334.56	$ 970,800.84
Less Repairs and Replacements	2,447,300.31	1,944,573.38	502,726.93
Remainder	$ 12,568,835.09	$ 12,100,761.18	$ 468,073.91
Net Earnings from Mining Properties	3,113,104.83	2,000,186.79	1,112,918.04
Total Net Earnings of Operating Properties	$ 15,681,939.92	$ 14,100,947.97	$1,580,991.95
Other Income—Net:			
Interest, Rents, Dividends received, Commissions, etc	$ 1,077,559.61	$ 1,011,177.33	$ 66,382.28
Gross Income	$ 16,759,499.53	$ 15,112,125.30	$1,647,374.23

Charges Against Gross Income:			
Administrative Expenses	$ 758,176.70	$ 767,982.19	$ 9,805.49 [1]
Research and Examination Expenses	159,618.91		159,618.91
Corporate and Excise Taxes	123,917.01	114,198.06	9,718.95
Interest and Discount on Debenture Bonds	950,000.00	870,833.34	79,166.66
Depreciation and Amortization	3,013,543.23	1,887,399.07	1,126,144.16
Appropriations for Employes' Bonuses and to Pension Reserve	367,822.68		367,822.68
Book Value of Investment Securities written down	306,745.22	900,210.00	593,464.78 [1]
Total Charges	$ 5,679,823.75	$ 4,540,622.66	$1,139,201.09
Net Income for the Year	$ 11,079,675.78	$ 10,571,502.64	$ 508,173.14
Profit and Loss Surplus at Beginning of the Year	13,699,726.31	11,148,223.67	2,551,502.64
Profit and Loss Gross Surplus	$ 24,779,402.09	$ 21,719,726.31	$3,059,675.78
Less Dividends:			
On Preferred Stocks:			
American Smelting & Refining Co	$ 3,500,000.00	$ 3,500,000.00	
American Smelters Securities Co.: Preferred "A"	1,020,000.00	1,020,000.00	
American Smelters Securities Co.: Preferred "B"	1,500,000.00	1,500,000.00	
Total on Preferred Stock	$ 6,020,000.00	$ 6,020,000.00	
On American Smelting & Refining Co. Common Stock	2,000,000.00	2,000,000.00	
Total Dividends	$ 8,020,000.00	$ 8,020,000.00	
Profit and Loss Surplus	$ 16,759,402.09	$ 13,699,726.31	$3,059,675.78

[1] Decrease.

REVIEW

Since the stock of subsidiary companies is, as a rule, purchased at a premium, how shall excess of price over book value of assets be treated in books of parent company?

What four kinds of surplus can a holding company have? Explain how they differ.

What different purposes do consolidation balance sheets serve, and how does this affect their construction and the explanatory matter which accompanies them?

CHAPTER XX

PRIVATE BUDGETS

1. *Purpose and definition of budgets.*—The various forms of financial and other statements, previously discussed, deal with transactions which have occurred in the past. They indicate the success or failure of transactions already completed or in the course of completion. The business manager of today, however, in many cases, requires information on the conditions which may be expected in the future. This information must be in the form of a scientifically prepared and classified statement of the future, and not a haphazard or indefinite forecasting. It must be a complete budget, based upon the best data obtainable from the recorded results of the past.

2. *The annual budget.*—The annual budget is a detailed statement or program, outlining the financial plans of the management for the coming year and the methods by which it proposes to accomplish these plans. This statement calls for a careful estimate of the total income or revenue from sales of product or service, which it is expected will be realized during the year. It also calls for a careful estimate of the entire cost of operation during the year, showing separately

the cost of each individual department and sub-schedules of the cost of operation within departments.

3. *Interim reconciliation of estimate with costs.*—In order that the management may be informed as to the actual working out of the predetermined outlay and income during the fiscal year, there should be furnished a periodical statement which may be made up semi-annually, quarterly or monthly. This statement should disclose the exact financial condition at the beginning and at the end of the period and the actual outlay of each department or operation during the period. A comparison of these costs with those for similar periods in previous years should be made. The balance of the appropriation, which remains to each department for its operations during the remainder of the fiscal year, should also be shown.

4. *The final statement.*—At the end of the fiscal year, the final statement should show a comparison of the actual results with the predetermined results. The revenue received on account of each departmental function, or unit of service, will be compared with the predetermined estimate, and the actual cost will be contrasted with the predetermined cost.

5. *Value and use of estimates.*—The value and use which can be made of these estimates is evident when we realize that the success of a business enterprise is dependent chiefly upon the ability of the management to plan intelligently for the future, and that a large percentage of business failures is directly traceable to neglect in anticipating financial needs in

time to provide for them. Construction work, provision for the expansion of business, increased sales, rising costs of production, etc., must be anticipated and provided for before they actually arise. The diversification of industry and the constantly increasing necessity of depending upon indirect supervision and management, together with rapidly changing business conditions, necessitates the use of scientifically prepared forecasts.

6. *Budgets as a means of guidance.*—A budget guides the executive in developing policies, by forecasting the effects and results of these policies. It insures financial preparedness by indicating financial needs before they actually arise.

The estimated needs of the different departments are, in turn, indicated by means of departmental budgets. These are grouped into one general budget, covering the needs of the business as a whole. The departmental budgets serve as guides to the department heads, and their operations during the period will be governed by their departmental budgets.

7. *Special budgets.*—In addition to the general and departmental budgets, which may be designated as regular budgets, it is occasionally necessary to prepare a special budget for a particular purpose. Such purpose may be that of attempting to forecast the effects and results of a particular policy or of conditions in a particular department. For example, the management may wish to know how a proposed increase in the kinds of goods produced will work out.

A budget may be prepared showing just how this change will affect the growth of the business and how practicable the venture will be. Special budgets are used at times to supplement the regular budgets when changes in conditions have been so extreme as to render the original departmental budget valueless.

8. *The sub-division of budgets into monthly periods.*—For practical use, a budget should be subdivided into monthly periods. The operations of one department may not synchronize with those of another and while the budget covers the operations of the fiscal year, the management must forecast the conditions at all times between the beginning and the end of the year. It very frequently happens that at some time within the fiscal year, the amount of obligations payable will temporarily exceed the amount of the cash and receivables available to meet them, thus making it incumbent upon the management to have sufficient funds, either owned or borrowed, to meet the immediate needs at that particular time. If the budget is prepared on a monthly basis, this information will be at hand, and the proper financial preparations can be made.

9. *Pre-requisites of a budget.*—A satisfactory and efficient accounting system is a pre-requisite to the preparation of an intelligent forecast of future conditions. The accuracy of the budget will depend in great measure upon the accuracy with which past transactions can be interpreted. This means that in most cases it will be necessary to have proper cost

records in order to ascertain with as much certainty as possible, the cost of the goods which are expected to be sold during the ensuing year.

10. *Budget routine.*—It is, of course, impossible to lay down a budget routine that will apply in practice to every individual case. The budget information for each department must, of necessity, be initiated by the men who are responsible for the department, and who are, therefore, most familiar with the actual working.

In this connection, the department head should encourage a general discussion of the subject with his subordinates and the views of every man who can offer helpful advice, should be considered. The plans and program for the ensuing year should first be outlined. A statement should be made of the anticipated income or revenue to be received by the department, together with a careful estimate of the costs in minute detail. In some instances, it will be necessary to reverse the order, first to determine the cost and then upon the basis of the figures of the estimated cost to measure the appropriation which the department is to ask for, to cover its operations during the year. When this information has been carefully analyzed and when from the experience of the past, the estimates of the future have been determined, a detailed statement should be prepared by a uniform method, which all departments or functions will employ. The estimate is then submitted to the executive, usually the treasurer or president, for approval.

In some instances, department heads may not have available the necessary information as to costs and, in this case, the records of past transactions must be obtained from the accounting department. The exhibit on page 287 shows merely by way of suggestion, the general budget of a small manufacturing concern.

11. *Sales department's duties as to budgets.*—The sales department should furnish an estimate of the possible output for the ensuing year based upon the records of the past, and influenced by anticipated business conditions. In this connection the effect of a proposed change in prices will be considered. It will be seen that the accuracy of the estimate depends in a great measure upon the skill with which the general trend in business conditions is forecasted. In actual practice this will not present the same difficulty as it does in theory; if the budgets of previous years are studied in comparison with the actual results of the same years, mistakes in judgment will not be repeated. As in other things, experience is a great teacher and budget makers will find that their estimates will become more and more accurate from year to year. In the majority of cases, not more than from two to five per cent of the estimates will be found to be inaccurate.

12. *Budgets on four-week instead of calendar-month basis.*—A recent step in accounting work and budget preparation has been that of basing all reports

on four week periods rather than on calendar months. This plan has become especially popular in cost accounting. Its chief value lies in the fact that it furnishes a much better basis for comparison because of the even periods of time involved.

13. *Duties of production department.*—Based upon the estimate of the sales manager for the ensuing year, the production department will then be in a position to make its estimate. The purchasing department must investigate the market conditions, determine whether the raw and indirect material may be procured in sufficient quantity to meet the demands of the anticipated orders and a forecast must be made of the probable prices that will have to be paid for such materials. It may be possible, for example, to purchase the entire year's supply of raw materials at prices much less than may be obtained later. The effect of such a purchase on the profits of the period, and a comparison between the benefits to be received from immediate purchase of the raw materials, and their purchase distributed over the year should be considered.

The ability of the concern to finance such a transaction will have an important bearing upon the procedure to be adopted. The purchasing agent of a large railway supply house at the beginning of the European war prepared his budget upon the assumption that the price of copper would increase and convinced the executives that the proper thing to do

was to anticipate the requirements for a year or more if the organization would be financially able to carry the transaction thru.

The factory heads in the case of a manufacturing concern must be able to predetermine the output. It may be that the price of labor will vary at different times during the year. This is true, especially in certain of the garment-making industries. If sales and production can be predetermined with a fair degree of accuracy, it may be possible to manufacture during the time when labor is relatively cheaper.

On the other hand, the budget may serve to equalize production over the year instead of having the greater part of the work concentrated in a few months. The manufacture of stock within the limit of estimated sales would reduce the stress of the heavy business periods and cheapen the cost of production. It will thus be seen that the production manager and the purchasing agent must work hand in hand so that the latter may plan his future purchases so as to secure the best possible price and the delivery of material at the time the production manager requires it.

Thus we see that each department is dependent upon some other and that we shall have a series of reports, each report based in part upon the estimated needs of the other related departments, each one dovetailing into the others. Each departmental report must be complete and should be accompanied by explanatory schedules where necessary.

14. *Assembling the data.*—The actual work of

classifying, grouping and assembling all these reports into one general comprehensive budget can best be performed in the treasurer's department. While each department is preparing its estimate, the treasurer should make up a comparative statement in budget form of the actual receipts and disbursements of several prior periods, and also a list of all special payments, or receipts for the next year which are, as a rule, known only to the financial division. Items of this kind will cover, for example, advances, loans, interest, investments, construction requirements or the possible sale of securities, either stocks or bonds. By the use of a comparative report of previous years' operations and the departmental estimates, the actual work of preparation is facilitated.

All revenues and expenses are dependent upon four factors; namely, the amount of business expected, the anticipated cost, general business conditions, and extraordinary plans or projects. Subject to the trend in general business conditions and any changes in cost, the expenses will increase or decrease over previous years in proportion to the increase or decrease in the amount of sales. The first step, then, is to arrive at a budget, based solely upon proportionate changes as compared with the actual conditions or transactions of previous periods. Increased or decreased costs, good or bad general business conditions, new undertakings, new conditions in departments, and the like, will each tend to alter the budget, and hence each must be given careful, individual consideration.

Reference to the accounting records will often aid in determining the influence of these unusual circumstances. The effects of previous changes will be clearly shown and from these we can draw inferences as to the effect of the present changes. In any event, we can estimate these changes as being a certain percentage above or below normal and adjust our budget accordingly.

To these figures must be added the items of possible receipts and expenditures already listed. Construction to be financed by loans should be so designated in the budget, and only such portions of payments on account of construction or repairs as fall due in a budget period, should be considered. This provision also holds good in connection with other items, as a budget estimate covers only cash transactions occurring within a budget period.

15. *Checking the data assembled.*—The assembled data should be carefully revised and checked. One department or function may have planned certain changes which call for increase in appropriation, and the management may disagree with the department head. Then it becomes the latter's duty to justify his expenditure—to try to "sell" his idea to the executives. If he succeeds in doing this, his estimate will be allowed to remain; otherwise it will have to be abandoned. The production department or the factory superintendent may foresee the necessity of a general increase in the wages of factory employes; it may be that he had not enough breadth of vision to foresee the

necessity, and his estimate based upon past labor costs will have to be revised.

The assembling of the data, the balancing of estimates, the revision by the executive of the financial department, the predetermination of costs within the limit of the receipts as fixed by the sales, constitute the scientific part of budget preparation. The dovetailing of the schedule of one department of the organization to those of other departments and the welding of all into a comprehensive whole, calls for the exercise of prudence and judgment. The budget in its final form after being passed by the treasurer or financial officer best qualified to assemble it, is submitted to the board of directors for their examination and approval.

After approval by the board of directors or by the management, the budget becomes the treasurer's financial guide. He is enabled to make such disposition of the funds as will enable him to handle them most economically, and yet, always to have sufficient funds on hand to meet whatever payments fall due. This reason alone makes it necessary that the appropriations of the budget be closely followed. The treasurer would be in constant trouble if the departmental heads were permitted to spend the money without conforming to the standard which they had previously set.

16. *Interim check on the budget.*—For this reason, therefore, the periodical statements mentioned above must be prepared to show the actual receipts

and expenditures as compared with the estimated budget. The statements will thus act as a check on the company's operations and on the accuracy of the budget estimate. Any great discrepancy between the actual transactions and the estimates must result from one of three causes: estimates may have been carelessly prepared; the department heads may have departed from the program which they had set; or, unusual outside conditions may have brought about the change.

In any event, these discrepancies should be investigated and explained. They are signals—sometimes danger signals—and must not be ignored. Thus, the reader will see that the budget forms a reasonably accurate forecast of the future conditions to be met by the management. It serves as a general guide in that it often forestalls mistakes and unwise moves, or, at least, points them out in time to avoid great loss. The budget forms the basis for a revision of plans when changing conditions make a revision necessary. Unless the management has some guide by which to gauge the concern's progress, it will not be able to tell at once when a change in plans is desirable, and losses or misdirected efforts must result.

17. *Other considerations in budget making.*— Even when loans are not regularly resorted to as a means of financing a business, it may often be found that demands for cash at various times during the year will require temporary borrowing. Borrowing then, within the limits of credit, forms the balancing

medium of the budget. If the borrowings are caused by factors within the control of the executives, the raising of the loans may be avoided by abandoning that part of the work which necessitates the extra money.

18. *Working back from the income statement.*— In some of our large corporations, particularly the public service corporations, it is sometimes difficult to work up a budget based upon actual cash transactions. These corporations may make up an estimated income and expenditure statement based upon the principles which have just been discussed. In order to arrive at the actual cash transaction involved in this income and expenditure statement, it is necessary to eliminate all items not represented by actual cash receipts or payments that occur during the fiscal period under consideration.

This practice, however, is not to be recommended, because it is less accurate than the plan which we have outlined before, and, furthermore, does not provide for a monthly statement of the transactions involved. There seems to be little doubt that even the larger corporations can secure estimates from their department heads regarding the actual cash transactions to be made during the year.

There are, perhaps, certain lines of business in which the budget idea may not be suitable. The general opinion among certain public service corporations for example, is that a budget is not practical. Even in these cases, however, an attempt is made to estab-

lish a construction budget. The amount of quick assets available, and the amount to be secured by new financing will furnish the funds needed to finance new construction. Based upon this estimate, the construction program for the following year is outlined.

19. *Departmental standards required for budget making.*—The departmental budgets are especially valuable in holding department heads to given standards. The departments have certain allowances for expenditures and are required to produce certain results in return. Any deviation from the standard must be due to unusual conditions or to a fluctuation in managerial efficiency. Often departmental budgets cover all the operations and activities of the departments by setting arbitrary limits outside of which the departmental manager has no authority. It is doubtful, however, if such rigid control is advisable in any but exceptional cases.

The departmental budget also serves to equalize production not only according to time, but also according to the needs of other departments whose work may be related to that of the department in question. If the budget requirements for each department relate satisfactorily to each other, then the actual work that is carried on in accordance with the budget requirements should interlock efficiently.

THE.....COMPANY
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDING DECEMBER 31, 191—

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
Estimated Sales													
Carpets	$52,000	$53,000	$60,000	$62,000	$59,000	$55,000	$40,000	$44,000	$50,000	$59,000	$54,000	$50,000	$638,000
Rugs	8,000	12,000	15,000	20,000	18,000	15,000	10,000	13,000	20,000	35,000	30,000	25,000	221,000
	20,000	18,000	18,000	23,000	23,000	20,000	15,000	18,000	19,000	20,000	18,000	8,000	220,000
	10,000	12,000	22,000	20,000	25,000	15,000	10,000	10,000	11,000	11,000	13,000	12,000	171,000
Total	$90,000	$95,000	$115,000	$125,000	$125,000	$105,000	$75,000	$85,000	$100,000	$125,000	$115,000	$95,000	$1,250,000
Estimated Receipts													
Accounts Receivable	$60,500	$62,000	$75,000	$87,500	$95,000	$98,000	$93,500	$90,500	$87,000	$93,500	$96,000	$91,000	$1,029,500
Loans		10,000	10,000		10,000								30,000
Notes Receivable	15,000	5,000	1,000	15,000	3,000	5,000	3,000	5,000	1,000	5,000	9,000	6,000	72,000
	3,000		6,000	8,000	8,000	7,000	6,000	5,000	5,000	5,500	6,000	6,000	65,500
	3,000	3,500	7,000	9,000	9,000	8,000	7,000	6,000	6,000	6,500	7,000	7,000	79,000
Total	$81,500	$80,500	$99,000	$119,500	$125,000	$118,000	$109,500	$106,500	$99,000	$110,500	$118,000	$109,000	$1,276,000
Estimated Disbursements													
Salesmen's Commissions	$15,000	$16,000	$19,000	$20,000	$20,000	$17,000	$13,000	$13,000	$15,000	$20,000	$20,000	$16,000	$204,000
Wages	11,000	11,500	11,000	11,500	12,000	11,800	11,500	12,800	13,500	15,800	16,000	16,300	154,700
Managerial Salaries	5,000	5,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	7,000	7,000	7,000	73,000
Office Salaries	2,000	2,500	4,000	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	49,000
Accounts Payable	11,000	15,000	14,000	18,000	18,000	18,000	12,000	14,000	15,000	16,000	17,000	16,000	184,000
Notes Payable	5,000	7,000	7,000	10,000	12,000	15,000	20,000	15,000	15,000	20,000	20,000	15,000	161,000
Loans				10,000	10,000		10,000						30,000
Advertising	5,500	10,000	15,000	12,000	10,000	5,000	3,000	3,000	15,000	20,000	10,000	5,000	113,500
Freight	5,000	5,000	5,200	5,500	5,500	5,500	4,500	5,000	5,000	5,500	5,500	5,000	52,200
Branch Offices	2,000	1,800	2,000	2,200	2,000	1,800	1,500	1,500	1,800	2,500	2,500	2,000	23,600
Miscellaneous Selling Expenses	3,000	4,000	4,500	5,200	5,500	5,000	3,000	3,500	4,500	6,000	4,800	4,500	53,500
Rent	3,600	3,600	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	47,200
General Expenses	1,000	1,000	1,200	1,500	1,500	1,200	1,000	1,000	1,500	1,500	1,500	1,500	15,400
Dividends	7,000	2,000	2,000	2,000	2,000	2,000	7,000	32,000	2,000	2,000	2,000	2,000	64,000
	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Total	$78,100	$86,400	$96,900	$114,400	$115,000	$98,800	$103,000	$117,300	$104,800	$126,800	$116,800	$100,800	$1,259,100
Balance	$3,400	※$5,900	$2,100	$5,100	$10,000	$19,200	$6,500	※$10,800	※$5,800	※$16,300	$1,200	$8,200	$16,900
Cash Balance at Beginning of Period	10,600	14,000	8,100	10,200	15,300	25,300	44,500	51,000	40,200	34,400	18,100	19,300	10,600
Cash Balance at End of Period	$14,000	$8,100	$10,200	$15,300	$25,300	$44,500	$51,000	$40,200	$34,400	$18,100	$19,300	$27,500	$27,500

※Excess of Disbursements

REVIEW

Explain the relation of a budget to the accounting system.

Should the budget be made only on an annual basis or for shorter intervals? Give reasons for decision of this question.

Describe the share of the sales department, the production department, and the treasurer in the preparation of a budget.

How far is the budget idea applicable and what are the advantages which result from its use?

CHAPTER XXI

MUNICIPAL BUDGETS

1. *Development of municipal budgets.*—It has always been necessary for some part of the governmental agencies, either the administrative or the legislative, to prepare rough estimates of the necessary expenses of the corporation for the ensuing fiscal year. This information was used as a basis for tax levies. For many years, this work was undertaken in a haphazard and unscientific way. The gradual development of the science of government, the increasing demands made upon municipalities for further improvements, and the constantly increasing municipal debts of our American cities have forced the authorities to adopt some systematic plan for financing and controlling the expenditures of municipal corporations. Furthermore the authorities realize that business methods, by which a complete check is had on all transactions and operations, are as important in the management of municipal activities as they are in business organizations.

2. *Distinction between private budgets and municipal budgets.*—In the preparation of private budgets, the reader noticed that it was necessary to limit the expenditures of the fiscal period by the amount of

the expected receipts. No such limits are placed upon the makers of municipal budgets. The expenditures are determined, then the revenue is adjusted to correspond. This statement must be qualified, for tax levies and other municipal charges must not be exorbitant. Furthermore, the tax levy is offset by the amount of certain incomes which municipalities receive for water rates, dock and ferry privileges, investments in rapid transit enterprises, license and court fees, etc.

A municipal budget, then, is a comprehensive, detailed plan or program of the work to be accomplished by the administration during the ensuing year, together with a detailed estimate of the cost thereof, covering all departments and all operations of the municipality. By the use of this plan, the taxpayers are enabled to check up the work of their representatives and the chief administrative officer is enabled to have a check on the acts of his subordinates by holding them to the limits of the budget. Furthermore, it gives the controller a record against which he may judge the various departmental warrants or checks, which are presented to him for payment. As a rule he has no authority to make payments in excess of the amount allotted in the budget to a particular department or division.

To the department head, the municipal budget becomes an arbitrary guide in the making of purchases or in operating his department. He has definite limits set for him as to the expenditures which he can

make. He knows that certain results in actual work, laid down at the beginning of the year in the financial program, are expected in return for his expenditures. He must not only keep his withdrawals within the limits of the budget, but he must obtain for these withdrawals a maximum of results and the completion of the program laid down in the original estimate.

3. *Borrowing by municipal and business organizations differentiated.*—The reader has seen that the private budget serves to keep the business house supplied with sufficient funds to meet its obligations. The municipal budget on the other hand, while serving this purpose to a limited degree, does not always result in that desirable end. Municipal taxes are frequently not collected until the latter part of the year, while the expenditures chargeable to the budget appropriation, begin to accrue immediately. Many municipalities have now adopted the plan of having taxes payable semi-annually. This reduces the necessity of borrowing and results in a considerable saving of interest for the municipalities. In a recent address, Hon. William A. Pendergast, former controller of the City of New York, illustrated the saving which New York City made by providing for the collection of taxes twice a year.

In 1906, on a tax levy of $94,000,000, the city paid in interest, on revenue bonds issued in anticipation of the collection of taxes, $2,898,562.

In 1909, on a tax levy of $122,750,000, the city paid in interest, on revenue bonds issued in anticipation of the collection of taxes, $5,194,241.

In 1912, under the semi-annual tax plan, on a levy of $150,500,000, the city paid in interest, on revenue bonds issued in anticipation of the collection of taxes, only $2,479,635.

Thus, it will be seen that the municipal budget does not seek to provide the funds at the time when they are needed, as is the plan of a private budget, but it is interesting to note that progress has been made in this respect, and that municipal authorities are alive to the evil of interest charges and large floating debts.

4. *Old-time budgets.*—Under the old-time (so-called) budget system, each department head furnished the legislative body with a lump estimate of the needs of his department. This method was open to numberless objections. Inasmuch as the appropriation was made in one lump sum for the department, all possible avenues for misapplication of the funds were open. The amount which was to be expended for salaries was not stated, nor was the amount to be expended for any one of the department's usual needs specified in the budget. Consequently, there was open to the head of the department the opportunity of diverting funds, which should have been used for the real needs of the department, to improper purposes.

When the legislative bodies began to prune the department head's estimates, the department head simply increased his estimate above the figure which he actually expected to get. Any reduction by the legislative body simply tended to bring his particular

allotment down to the amount which he actually desired.

5. *The modern budget.*—The modern budget takes several different forms, but is founded on the idea of a collateral check and investigation of the estimates submitted by department heads. The department heads are expected to confer with those qualified under them and submit an estimate which measures, as accurately as can be foreseen, the actual needs for the ensuing period. There are two kinds of budgets now in use, the segregated and the lump-sum, which, while varying somewhat in form, are practically representative of modern municipal budget practice.

6. *The segregated budget.*—The segregated budget provides a very complete and absolute check on the operations of every department. Departmental estimates are submitted on a form which calls for detailed information in support of the requests made by the department head. All proposed expenditures are itemized in detail so as to make them readily comparable with the transactions of previous years. The definite appropriation of sums for specific purposes prevents the diversion of funds to objects other than those for which they were designated. The department head has a fixed allowance for salaries and other expenses, and there is no opportunity for him to utilize any part of the appropriation for other purposes without securing the necessary authority for so doing. Under this method, estimates are in such a shape that

they may be subjected to intelligent scrutiny by expert examiners of a budget commission or by any one interested.

This method has many disadvantages which will often defeat its purpose: a considerable expense is entailed in the employment of a large clerical and examining staff; rigid classification will frequently hamper the heads of departments and handicap them greatly in their work; it is so inflexible that any unforeseen contingencies or changed conditions cannot be satisfactorily provided for. On the other hand, if the idea of segregation is carried out with judgment, it will prove, as a rule, efficient in operation.

7. *The lump-sum budget.*—This method is directly opposed to the segregated budget in many of its features. Under this plan, the estimate for each department is expressed in a lump sum. However, to overcome the disadvantages of a lump sum appropriation unsupported by further details, and in order still to maintain the flexibility of the operation of the lump sum budget, cost schedules and working plans are made a part of the budget. These cost schedules and work plans must cover the complete operation of the department. The current year's expenses, the program of work to be covered, and a working plan of the effects of this year's projects on ensuing years must be made a part of the estimate. This method provides for the carrying thru of new projects to their completion even tho the administration changes. The lump-sum budget system has shortcomings as

well as advantages. There is no way of keeping a department head strictly within his appropriation, for, unless the cost schedules are made a mandatory part of the budget, he has full power to shift funds at his pleasure. On the other hand, as soon as the cost schedules are made rigid and controlling, the lump-sum budget becomes, in effect, a segregated budget.

8. *A variation of the lump-sum budget plan.*—Under this method, the appropriation is not arbitrarily fixed for the entire year. In order to obtain the advantages of the segregated budget and the flexibility of the lump-sum budget, the budget commission will make quarterly allotments of the appropriation for the necessary purposes during that quarter. This practically results in a quarterly examination of the department and its needs. The allotment cannot be made unless the budget commission is thoroly familiar with the conditions and plans of the department. It results in a segregated budget, or, rather, a classification of expenses for the ensuing quarter.

9. *The essentials of municipal budget preparation.*—In the first place, it is necessary in the preparation of a budget that the transactions of previous years be compared and used as a basis for the appropriation for the ensuing period. The estimates should give details with such minuteness and in accordance with such standard classifications as will enable the comparison to be made. Second, estimates should be prepared by department heads with the aid of their sub-

ordinates. As in a private business, every opinion of weight in the division or department should be called for at the time the estimates of the budget are first being made up. Third, the estimates should be subsequently examined and investigated by some person who is familiar with the details and needs of each department but who is not connected with any of them. This may require the services of an independent investigation bureau. Fourth, the estimates should be considered at public hearings at which interested taxpayers may discuss any details to which they object or in which they are otherwise interested. Fifth, the budget should not grant a lump sum to any department which it may spend in any way it pleases. The budget should be segregated sufficiently to allow a reasonable check on the actions of the department heads. The department head should be required to make the best use of whatever funds are at his disposal. Sixth, the budget must be founded on law and based upon clear and honest accounting records.

10. *Legal foundation for budget necessary.*—To be successful in operation, a budget, no matter what its form, must be founded on law. Its features of administrative and financial control will not operate to any advantage unless they are compulsory. History furnishes one or two instances where the chief executive has tried to follow out a budget plan without securing the passage of a budget law. His attempts, while commendable, were not successful because he could not secure the cooperation of the

legislative body and of his subordinates. The law prescribing a system of budget preparation must be complete in all details and must lay down the rules of procedure in the most minute degree. The temptations of public positions will frequently turn honest men into dishonest public employes unless some legal and capable check is placed on their work.

11. *The accounting foundation in budget making.*—A proper accounting system is equally important. If the legal statutes pertaining to a budget system cover the accounting procedure, so much the better. A comprehensive accounting system, providing complete information regarding the detailed operation of every department, is necessary. Standard accounts and a uniform classification of expenditures for the various departments should be required. The records of actual expenditures of previous periods should be available for comparison with the estimated expenditure for subsequent periods.

12. *Statistical methods in connection with budget reports.*—In municipal transactions the personal and financial elements are of equal importance. Personal service records of all employes, with detailed information as to their ability and past records, should be kept. Positions should be standardized and classified by competent investigators. It is not easy to find the right type of men to do this work, and much of the criticism that has been leveled at bureaus of standards is justified, because of the incapacity of those who have been entrusted with this work. There is a large

field for the development of the use of statistical methods in connection with budget reports. Department heads, in submitting their departmental estimates, and the budget commissions, in presenting a complete budget to the legislative body or to the public, should make use of graphic exhibits. Important points that would be lost in the maze of figures will show up far more clearly if pictured in graphic form. Unit costs, wherever obtainable, compared with the results of previous years, will often be interesting. Charts of the intangible results obtained from the operations of various departments will measure to some extent the efficiency of these departments. For instance, the exhibit of the fire department might chart the number of fires during the year, the amount of fire loss for each year, and comparative figures with the results in other cities. The police exhibit, the health exhibit, etc., might take much the same form. The savings made in operating expenses, thru the use of modern mechanical aids to bookkeeping and recording, might also be illustrated.

13. *Budget machinery.*—We have seen that the first step is to have estimates from department heads and to require that these estimates be properly supported by explanatory schedules and comparative statements of results in previous years. After the departmental estimates have been turned in, an independent investigation should be conducted by the budget commission or its representatives; this investigation may be collateral with the preparation of the

departmental estimates. In the final hearings on the budget, publicity is a prime essential. The complaints or suggestions of citizens should be given due consideration.

After receiving reports from the investigators and hearing the public criticisms, the commission or body charged with the duty of preparing the budget will set the maximum limit for budget appropriation. Departmental heads will be consulted when it is proposed to reduce any budget appropriation. In certain cases, the hands of a budget commission are tied by a state legislature because of the passage of special enabling acts or mandatory provisions. The budget is then usually submitted to a legislative board, which board has usually the power to reduce but not to increase the appropriations.

14. *Determining the tax rate.*—Notwithstanding popular opinion, city officials in a single year can do very little toward increasing or decreasing the tax rate. Many of the expenditures are fixed in amount and cannot be affected by the actions of the city officials. For instance, interest on municipal debts, sinking fund contributions, and the municipality's share of the state or county taxes are entirely outside the control of the municipality. On the other hand, certain expenditures have been made mandatory by state legislatures, and many others are semi-fixed because of their very nature.

At regular intervals during the fiscal year, reports should be published showing the amounts appro-

priated for the use of the various departments, the amount expended by the departments to date, the commitments against any appropriation to date even tho the expenditure has not, as yet, been actually paid in cash, and finally, the unexpended balance of the appropriation. Whenever work schedules form part of the budget, then the actual results accomplished should be set off against the work schedules.

15. *Transfers and changes in the budget.*—The budget commission, or other board, having power to check up the operation of the budget, should also have full facilities for examining into details. They should be empowered to approve of changes in policies and able to increase appropriations where necessary. They should also authorize the transfer of funds when such a step is advisable. In this connection, it would be well to state that any transfer of funds from one appropriation account to another or from one department to another, should be made only after the relative needs of each department or each function have been carefully examined.

16. *Providing in the budget for unforeseen needs.* —It will frequently happen that estimates at the beginning of a period will not be strictly applicable thruout the period. Unforeseen needs will arise in connection with some function, or, certain other functions may be over-estimated; for example, a serious epidemic might exhaust the funds of the health department and make necessary an increase in the appropriation. The accounting records will show all

the surplus funds either of an individual department or of the city as a whole. The governing board having charge of the preparation of the budget or its operation, should have power to re-allot these undistributed portions wherever extra or unforeseen needs arise.

17. *Other public budgets.*—Closely related to the subject of municipal budgets is the use of budgets in the county, state and federal governments. The conditions here are so different from those in cities that the need of budget reform has not been so noticeable. Indirect taxation, which furnishes most of the revenues of such bodies, is not felt by the public and is not a subject of such direct importance to them. The tendency of the officials of such governmental bodies has been to spend the amount of the revenue received rather than to reduce the tax rate, because indirect taxation usually brings in an indefinite and frequently an excessive revenue. The budget system, however, is just as essential for these forms of government and should be carried out.

18. *Some fundamentals in budget interpretation.*—While the methods followed in interpreting budgets by officials, or by taxpayers, will vary with the budget system and with the individual conditions of each locality, the reader will note a few fundamental points which should be observed.

The interest centers quite naturally on the expenditure side of the budget more than upon the receipt or income side. Comparison between expenses

of preceding years, the appropriation for the coming year and the expenses of the current year up to the date of the report, together with the estimated expenses for the rest of the current year, and the departmental estimates for the complete year should be arranged side by side. Any differences in these amounts should be noted and changes from year to year should be watched. For example, an increase in personal services, supplies and the like, or a decrease in services other than personal, such as contract services, would indicate that more of the city's work was being done by its own employes and less by outside contracts.

A decrease in rentals or an increase in property purchases might indicate expenditures for permanent property to replace leased property. A marked falling off in the maintenance expenses might indicate that the property and equipment were not being properly kept up. Increased expenditure for property acquisition should result in an increased maintenance charge in succeeding years. If this does not result, then the property is not being maintained properly. Increases in operating expenses may be the result of the expansion of existing functions, the taking on of new functions not previously performed, or the result of inefficiency of operation.

The relative use of borrowed moneys for current expenses and for permanent improvements should be clearly indicated in the comparison. These are but

a few of the many factors for which one examining a municipal budget must watch. They afford, however, some indication of the manner in which such statements should be read.

19. *Extending the scope of the budget.*—Where the city is operating a municipal gas plant, a street railroad, or other revenue-producing property, separate and detailed operating statements, as well as balance sheets for such properties, should be prepared. The time is undoubtedly coming when the taxpayers will receive reports of municipal operations disclosing (1) the financial condition of the municipality, showing its permanent assets and improvements, and the funded debt of the municipality, (2) its available assets in liquid form and its outstanding obligations and commitments—both of these statements to be prepared in comparative form, (3) the separation of income and capital receipts and payments.

When these reforms have been carried out, the public officers of a municipality will be able to justify their administration. The taxpayers and the administrative officers of the governmental body will also have information upon which may be determined, first, the character and the cost of the services rendered; second, the economy or waste in the various departments; third, the efficiency or inefficiency of public officials and employes; fourth, the financial condition of the municipality at any stated time; fifth,

a just apportionment and distribution of the tax levy among the various departments each of which compete for their respective allotments.

The taxpayer will know whether or not he is receiving his money's worth for the taxes he pays; he will know that his public officials are honest. He will know that proper provision is being made for interest and amortization of the city debt, and he will be able to determine in his own mind whether or not the administration is "making good."

REVIEW

What is the fundamental difference between a private and a public budget?

What part does borrowing play in a municipal budget?

Distinguish between a segregated and lump sum budget and state the advantages and disadvantages of each.

Describe the process of preparing a municipal budget.

How far is it possible for city officials to alter the tax rate?

What information is to be sought in examining a municipal budget, and how may its items be listed as to their reasonableness?

CHAPTER XXII

INTERPRETATION OF PROFESSIONAL REPORTS

1. *Criticism due to improper interpretation.*—Much of the unjust criticism that has been directed against accountants and appraisers in the past is due to the fact that reports prepared by them have not been properly interpreted by the business man. On the other hand, just criticism must be given to those professional men who issue reports that are so obscurely phrased or vaguely worded as to make it almost impossible to determine the conclusions of the writer. Moreover, business men and the general public need to be informed of the technical meaning of certain terms and phrases which, thru long continued custom, have acquired a definite meaning or special significance in the business profession.

2. *Interpretation of an auditor's certificate.*—In the Text on "Accounting Practice and Auditing" the reader will have noted two common forms of certificates attached to the reports of auditors. A certificate may vary from the simple phrase, "Audited and found correct" to the very elaborate form of certificate which states minutely the responsibility which the auditor assumes for the valuation and verification of the principal classes of assets. Therefore, in read-

ing a report submitted by an auditor, attention should first be directed to the form of certificate attached. Qualifications, if any, should be particularly noted.

Thus, the certificate of an auditor which states that the books have been audited and that amounts shown in the balance sheet are in agreement with the values stated in the ledger, means that the auditor certifies to the fact that the balance sheet agrees mathematically with the figures found in the ledger of the business whose accounts have been audited.

From the business man's viewpoint, such a certificate has little value for the reason that no responsibility is assumed by the professional auditor except as to mathematical agreement. Assets may be grossly overvalued and liabilities may be understated in the books without disclosure. A creditor or an investor, noting that the certificate was signed by a licensed auditor, seeing also that the books have been "audited" and that the statement put forth by the firm agrees with its books, might be deceived to his detriment into believing that such a certificate guaranteed the financial condition of the firm.

3. *Certification as to values of real property and fixed assets.*—The reader has already learned that an auditor is not a valuer or an insurer. With what measure of confidence can we regard the certificate of the auditor as to the value assigned to fixed assets in a certified balance sheet? It is to be presumed that, if an unqualified certificate has been given in respect of the fixed assets, the auditor has either sup-

ported the valuation by having an appraisal prepared by competent appraisers or is satisfied in some other way as to the valuation. There is no doubt but that an experienced auditor is able to certify satisfactorily to the approximate value of fixed propery in many cases. At least, he is competent to express an opinion as to the adequacy of the provision for depreciation. But, on the other hand, his limited ability in the field must be clearly recognized by the reader of his certificate.

If the certificate states that the values assigned to the fixed assets appear to be conservative and no mention is made of an appraisal, the reader must understand that the auditor has merely exercised his best judgment and discretion in agreeing to the valuation. Whatever weight is to be given to his opinion in the matter the reader, having regard to the qualification and experience of the auditor, must determine.

It should be noted that an expression of opinion relative to the adequacy or inefficiency of the provision for depreciation is tantamount to a certification of the valuation of the property.

4. *Certifying to the valuation of inventories.*—One who reads a professional report should pay particular attention to the certificate of the auditor in respect of the inventories of raw material, work in progress and finished goods.

As a rule, the auditor will not be present when the inventory is taken, and the character of the merchandise stocks may have changed to a considerable

extent between the time when the inventories were taken and the date of the auditor's investigation. Thus, an auditor is often obliged to accept the valuation placed upon inventories submitted to him by the managers. Not only has he to accept the certification of the management as to quantities, but often as to prices.

However, even tho the auditor accepts the valuation and the quantities reported by the management and so states in his certificate, he is not relieved from the responsibility of assuring himself that the persons who took the stock were competent to do so and that they fully appreciated the importance of their responsibility. He will, as a rule, make some investigation into the accuracy of the method and system employed in ascertaining the value, and the correctness of the pricing and of the mathematical work so as to satisfy himself that the results are worthy of acceptance.

5. *Procedure where inventories may not be relied upon.*—Where the inventories have been taken by persons incompetent to do so; by those on whose judgment the auditor does not rely; or where, by reason of other circumstances, the auditor may not feel justified in accepting the statements handed to him, he will state in his certificate that the inventory has been entered at the values assigned to it, subject to whatever qualification he deems it necessary to append. The use of the phrase "subject to" implies that the auditor himself is not willing to assume the respon-

sibility for the quantities or the valuation and one who reads the report must be governed accordingly. In some instances the auditor will certify as to the accuracy of the extensions and footings and thus assume responsibility solely for this part of the inventory.

6. *An auditor is not entirely absolved by qualifications from responsibility.*—Even here the auditor is not absolved from all responsibility for, if anything arises during the course of his investigation which would lead him to believe that the officers were attempting to commit fraud in respect of the inventory or any other asset, it is clearly his duty to decline to give even a qualified certificate. Inasmuch as an auditor cannot control the use of his report after it leaves his hands, it is questionable whether or not he has relieved himself of his moral responsibility even tho he may have absolved himself from all legal responsibility by adroitly wording his qualifying certificate. An auditor should certainly refuse his certificate in cases where fraud has been attempted by the management for the reason that while the firm may agree to re-state values in those cases in which the auditor has discovered inflation, he will not always be able to ferret out all ingeniously laid schemes of fraud and he may thus pass over other frauds.

7. *Examples of attempted fraud.*—Not long ago, in the city of New York, the management of an American branch of a European concern was sued by a salesman for breach of contract. The verdict of the court was in favor of the salesman and judgment

was given to the amount of $13,000. The local management paid the amount of the damages but charged the amount thereof to a personal account in the name of the salesman. In the trial balance submitted each month to the European headquarters, the amount paid out was reported as an account receivable. A firm of auditors, upon being called to investigate, was requested to certify to the balance sheet and when this item was discovered very properly declined to give a certificate. It subsequently developed that the management of the branch had also grossly overvalued the inventory, thereby concealing operating losses in the year under investigation amounting to $178,000.

In one of the recent consolidations underwritten by a firm of Eastern bankers, a firm of auditors was intrusted with the duty of preparing balance sheets of the various concerns to be amalgamated for the purpose of determining the basis upon which each concern was to be taken into the consolidation. While auditing the accounts of one of the concerns, the firm of auditors was obliged to transfer the principal in charge of the engagement to another station and his successor accepted the valuation of the inventory without sufficient investigation. When the consolidation finally took place, inventory values to the extent of $1,000,000 could not be located and the bankers underwriting the consolidation were compelled to put into the business an equivalent amount of cash to protect their own reputation as well as to

protect clients who purchased securities upon their solicitation.

8. *Auditor's report regarding statement of responsibility as to trade debts.*—If the report of the auditor contains an unqualified certificate in respect of the amount due from customers both on open accounts and notes, it may be assumed that not only has the auditor verified the amount, but that he has made adequate provision for all doubtful debts. Absolute verification of the amount due can only be obtained from the debtor, thru the medium of confirmation statements. In many instances, clients object to this practice of obtaining confirmation statements from their customers, under which circumstances the auditor cannot give an unqualified certificate. In these cases, other methods of verification are open to him. In the absence of any suspicious circumstances the auditor is justified in accepting the amount as stated in the ledger account. He will probably certify to the fact that, having made a test of the "accounts receivable" and having reconciled the customers' ledgers with the respective controlling accounts, they appear to be properly stated. He will also probably comment upon the sufficiency of the provision for doubtful debts.

9. *Interpretation of phrase "properly drawn up."*—The certificate of the auditor implies also that the balance sheet which he prepares has been drawn up in such a manner as to exhibit truthfully the financial condition of the undertaking. The term "properly

drawn up" implies that the amounts due from trade debtors are not to be merged with the amounts due for the loans made to officers or stockholders of the undertaking, or to partners. It does not include amounts due from stockholders on unpaid subscriptions to the capital stock of the undertaking.

Thus, the term "accounts receivable," while ordinarily a broader term than that of "trade debtors" or "customers' accounts" should include under it only those amounts due from trade debtors.

10. *Omission to furnish auditor's certificate in published report.*—The reader has undoubtedly noted statements in a prospectus or in the report of a company to the effect that the accounts of a company have been audited by Messrs. Blank and Company, Certified Public Accountants. The mere statement, unaccompanied by a publication of the auditor's certificate, that the accounts of a company have been audited, should be viewed with suspicion. The auditors may have made all manner of qualifications in their report of which the stockholders, investors or creditors would be ignorant unless they adopted the rather unusual step of demanding a copy of the report.

A dishonest board of directors may put forth a balance sheet which, while purposely misleading, may be issued in such a manner as to prevent the directors' indictment for fraud; at the same time the statement may be made that the accounts of the company have been audited by reliable accountants. The layman,

in the majority of cases, would be deceived by this practice.

11. *Meagerness of information in published reports.*—Criticism is sometimes heard of the meagerness of information disclosed in published reports of auditors. It must be borne in mind that published reports should not disclose, concerning the affairs of an undertaking, such information as would be to the advantage of competitors. Even tho the report may be meager in respect of the information disclosed, the stockholders may be reassured if the published balance sheet is that of a reliable firm of auditors and if a favorable or unqualified certificate of the auditor is attached. The auditors can be depended upon to prepare such statements as the stockholders ought to have but which, at the same time, will not disclose information of vital importance to competitors. Hence, it is, that stockholders or creditors should consider seriously the nature of the auditor's certificate where the published report fails to give sufficient information as will enable one to analyze the financial condition of the undertaking.

12. *Certificate of profit.*—Not infrequently one finds in a prospectus issued to aid in the sale of securities, a statement to the effect that, based upon a report prepared by Messrs. Blank and Company, auditors, the profit will be sufficient to provide for twice the amount necessary to meet interest on bonded debt and sinking fund charges.

The reader must bear in mind that Messrs. Blank and Company, the auditors, may not have made this unqualified statement, but the promoters or managers of the undertaking may have drawn a conclusion from a certificate of profit or a report prepared by the auditors. It is doubtful if any reliable firm of auditors would permit their own certificate of profit to be used for such speculative prediction. Auditors are justified, however, in preparing a report for the promoter or manager; the latter assumes all responsibility for the conclusions which are drawn from such a report. The investor must clearly understand that the auditors are not certifying to the profit to be realized in the future.

In preparing a statement of profits, an auditor is justified in eliminating certain items which may appear in the profit-and-loss account of an undertaking. In the first place, he may eliminate all sums paid for borrowed funds, on the theory that the concern intends to raise an amount of owned capital sufficient in amount to avoid the necessity of borrowing money. The sum paid for interest on borrowed capital is a penalty for not having a sufficient amount of owned capital in the business. Furthermore, the auditors may, for the benefit of the promoter, estimate the savings to be anticipated as a result of combination thru the consolidation of selling activities and the elimination of a great deal of the administrative expense. It has often happened, however, that these anticipated economies have not been realized and good-will based

upon the anticipated saving in many instances has been greatly over-valued.

13. *Reports of appraisers.*—From time to time the necessity has arisen, from one cause or another, of determining the present-day value of mercantile property. The great variety of property to be valued has resulted in the creation of several large appraisal companies which have gathered together a force of experienced engineers and valuers. These companies render a valuable service to the business community, and business undertakings are beginning to appreciate the value of the service rendered.

The reader has already seen that the problem of depreciation is one of the most difficult which accountants and business men are called upon to face. In order that it may be known whether or not proper provision is being made for depreciation, it is necessary to confirm by an appraisal the adequacy of the rates that are being used in depreciating the fixed assets of a business undertaking.

In public utilities the question of a fair rate of return on the investment necessitates an appraisal of the fixed property used in rendering the service to the community for the purpose of determining the principal sum upon which the rate of return is to be calculated.

The capital accounts of other business undertakings may have been kept in a haphazard manner and the clear differentiation between revenue and capital charges may not always have been observed. Hence,

the necessity of determining the actual value of the investment in fixed assets by means of a disinterested appraisal.

The purchaser of a business would be very unwise to take for granted that the book value of the physical assets, subject to depreciation, was the actual value and in purchasing property of this character, the cost of an appraisal may be regarded as a very cheap form of insurance.

Business men who may, perhaps, have had an unsatisfactory experience with insurance adjusters at the time of a fire loss realize the comparative ease with which their claims for loss may be proved if such claims are supported by a disinterested appraisal of competent valuers.

14. *Basis of valuation.*—Appraisal companies generally attempt to determine the value of physical assets at the cost of reproduction under present day prices for material and labor after deducting the fair amount for depreciation sustained since the acquisition of the asset. In addition, the appraisers will usually indicate the insurable value which is the cost of reproduction less physical depreciation with a further deduction for the value of that portion of the physical assets which is not the subject matter of insurance, such as foundations and excavations and subsoil structures. Provision is made for keeping the appraisal up to date by furnishing the company with a list of all after-acquired assets, and re-appraisals are usually made at periodic intervals.

15. *Adjustment of book values to appraised values.* —If the appraisal of property discloses that the value of any unit is less than the cost value as reduced by the accrued depreciation thereof, the book value should be adjusted to the appraised value. If the appraised value discloses the fact that the present-day value, at the cost of reproduction, is in excess of the cost less accrued depreciation, it would not be conservative practice to adjust the book value to the increased appraised value. It is not considered good practice to swell surplus accounts in this manner. It would be better to reduce the rate of depreciation in subsequent periods as the higher value indicates that excessive depreciation is being provided for.

In this connection, however, consideration must be given to the fact that appraisers are generally influenced in their consideration of value by the present-day costs of raw material and labor. These may be higher or lower than the respective costs at the time the assets were acquired. As has been stated, the accountants support the cost theory of value rather than the theory of cost of reproduction. The results shown by the appraisal should, as a general rule, be used only to correct the values of assets which appear to be over-stated but should not be used to change the value of assets which appear to be under-stated.

The appraisal also serves to justify the values entered for fixed assets in a proof of claim in fire losses because a contract of insurance is a contract of indemnity and the insured is entitled to recover from the in-

surer the value of the property destroyed at the time of fire.

16. *Reports of engineers.*—The reader may be called upon to base his executive judgment upon the report of an engineer and the same care should be used in the interpretation of a report of this character as is used in interpreting the report of an auditor. The value of the report of an engineer depends, in large measure, upon his experience. In the majority of cases, his conclusions are subject to adjustments because of the greater number of variables involved. This is especially true of mining engineering. An engineer's report should be prepared in collaboration with that of a competent geologist.

Another important point to be borne in mind is that the report of the auditor usually deals with conclusions based upon known facts of past experience. The engineer is called upon to deal with problems more or less speculative in their nature. Therefore, there is more necessity on the latter's part for extreme caution in interpreting facts and determining future results. A liberal allowance for possible error on the engineer's estimates of costs should be provided for; it is a well-known fact that many engineers have an inadequate conception of costs and accounts.

17. *Conclusion.*—The value of any report depends primarily upon the factors of the experience, judgment and integrity of the professional man who renders it. Conclusions based upon proven facts should

be clearly distinguished from opinions based upon speculative deductions.

REVIEW

What may the auditor's certificate contain, and why should its wording, its contents and omission be carefully scrutinized?

What responsibility may an auditor properly assume as respects inventories and accounts receivable?

Meet the objection that the auditors' published reports usually give scanty information. Should an auditor certify to probable profit and if so under what conditions?

What is the function of appraisal companies?

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